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HANDBOOK
OF THE
MEDICAL SERVICES
OF
FOREIGN ARMIES.

PART III.—AUSTRIA—HUNGARY.



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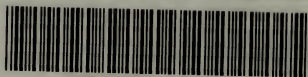
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INTRODUCTION.

In 1902 a "Handbook of the Medical Organisations (Chiefly for War) of Foreign Armies," by Lieut.-Colonel Frank Howard, Army Medical Staff (Retired Pay), was published officially. It contained a short account of the field medical units and some other details of the army medical service of twenty different States, and has been used as one of the text books for the examination of officers of the Royal Army Medical Corps qualifying for promotion to Lieutenant-Colonel.

In consequence of the Geneva Convention of 6th July, 1906, a knowledge of these services has become of greater importance than previously to officers of the army, more especially to officers of the Royal Army Medical Corps, and to all who may be associated with that corps in time of war. It has been found advisable therefore to alter the character of the handbook considerably in order to present a wider and more general view of the military medical services of other countries.

The plan has been adopted of preparing accounts of the more important of these services and publishing them in separate parts as each is completed. This will not only facilitate revision as changes occur in the future, but will place the parts in the hands of officers with less delay than if the plan were followed of issuing a complete revision of Colonel Howard's handbook in one volume.

The several parts are being compiled by Lieut.-Colonel W. G. Macpherson, C.M.G., R.A.M.C.

General Staff,
September, 1907.

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HANDBOOK

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MEDICAL SERVICES

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PART III.—AUSTRIA-HUNGARY.

CHAPTER I.

HISTORY.*

The earlier history of the army medical service of Austria-Hungary coincides with that of the army medical service of Germany. It was under the German Emperors Maximilian I and Charles V in the sixteenth century that an organized army medical service came first into being for both. Under the former, graduated ranks of medical officers were assigned to what was known as the German infantry, each company being given a *Feldscherer* (field barber), each regimental commander a *Wundarzt* (wound doctor), each colonel of infantry a physician and a *Feldscherer*, and each general in command of an army a senior or superior field surgeon, called the *Oberfeldarzt*. Little however was done for the care and nursing of men who were unable to remain with their units, and army commanders complained of the way in which their sick

* The compiler is indebted for the facts relating to the army medical service of Austria-Hungary almost entirely to the history written by Dr. S. Kirchenberger in 1895 in Vol. II of the "Handbuch für k. und k. Militärärzte" of Dr. Paul Myrdacz, published by J. Šafář, Vienna, in 1898.

and wounded were left under these circumstances to die without provision being made for their care; the army was not only materially weakened thereby but a general state of discontent and ill-feeling against the superior officers was created. This led to the adoption of a system under which places in towns and villages in the neighbourhood of the field forces were prepared for the reception and care of sick and wounded. For the purpose of establishing and managing these, each regiment selected a suitable person to act as *Spitalmeister*, who should receive voluntary contributions from the monthly pay and keep an account of receipts and expenditure. A captain and senior official of the regiment were appointed to act with him as an advisory committee and to see that the money was properly expended in the interests of the sick and wounded. In addition, a married soldier was selected from each company, who acted as *Unterspitalmeister* and with the aid of his wife looked after the patients. Later on and towards the end of the 16th century, alms boxes were placed in all the churches for the collection of money which was to be expended in ameliorating the condition of the sick and wounded, and in maintaining the places set apart for their reception. The people were appealed to by the clergy on all public occasions to give for this purpose according to their means. The origin of the field hospitals is traced to the arrangements thus organized for the care of sick and wounded. In the 17th century the arrangements were definitely taken over by the State, although from want of funds the provision made by it left much to be desired. The neglect of the field medical service from this cause was especially noted in the wars of the Prince Eugene of Savoy at the end of the 17th and beginning of the 18th century. A memorandum on military economy, dated 1673, by a member of the board of finance at that time, is quoted to show how at that early period responsible authorities recognized the financial loss which arose from the neglect to provide an efficient medical service. In it it was pointed out that the majority of lives lost in the campaigns in Austria and Hungary were lost through sickness and want, and that the sum required for a medical officer and apothecary, with a few drugs, sufficient to enable 1,000 sick to be restored to the ranks, would be four times less than the amount required in order to replace that number of soldiers by recruits, and by recruits, too, of whom three would not be so valuable as one veteran. Yet in the succeeding wars the

efforts of the military financial authorities appear to have been directed towards restricting expenditure on the medical service to as great an extent as possible, and the care of wounded and invalids was much neglected. In order to obtain funds for medical services a lottery was established in 1696 for a military hospital, and ever since then the lottery has remained a financial institution in Austria.* Prince Eugene of Savoy was constantly referring to the financial neglect of the medical service as a cause of inefficiency amongst his forces, and personally paid attention to the medical needs of his army. He made arrangements for the reception of the sick and wounded in field hospitals established in towns and villages on the main roads, in order to avoid their being jolted over mountain paths and widely scattered amongst the isolated villages and valleys of the Tyrolese Alps, as was the case in the earlier period of his Italian campaigns. His efforts to preserve the health of the troops are also noteworthy. In hot weather and with scanty water supplies, he gave instructions for the supply and canteen wagons to carry water with them for men suffering from sickness or fatigue, ordered frequent halts on the march and days of repose, and marched his men during the night or early in the morning instead of in the heat of the sun. The accounts of this period attribute much of his success as a military leader to the care which he thus took of his men, and to the provision made for restoring convalescents to the ranks as soon as possible.

As regards sick attendants during this period, both men and women appear to have been appointed to duty in the so-called field hospitals, but in insufficient numbers, so much so that Prince Eugene came to an agreement with the French Generals to have the medical personnel, who might be captured, sent back, thus anticipating a procedure which has been embodied in the Geneva Conventions some two centuries later.

After the wars of Prince Eugene and chiefly during the latter half of the 18th century in the reigns of Maria Theresa and Joseph II, several regulations affecting the army medical services were issued, and important changes in the character, qualifications and training of army medical officers, including the establishment of army medical schools, were introduced.

* "*Histoire de l'Autriche-Hongroie*," By Prof. Louis Leger, Paris. 1879. p. 266.

The first important change was in the issue of service regulations approved by Maria Theresa in 1749, under which convalescents and men unfit for combatant duty were appointed to act as sick attendants. The principle then established exists to the present day in the Austro-Hungarian field medical organization, under which men unfit to march in the ranks are formed into convalescent companies for duty in connexion with various improvised field arrangements, such as collecting stations for wounded, improvised rest stations, and so on. The proportion of sick attendants, thus allowed in the regulations issued in 1749, was 1 to 10 patients, or 1 to 5 if the cases were severe. The same regulations regulated the routine duties and administration of regimental hospitals, called "*Krankenspitäler*" at that time. The command was given to an ensign, lieutenant, or captain according to the number of patients in the hospital; a captain, for example, being appointed if the numbers exceeded 100. These officers were responsible for the cleanliness and good order of the hospital, and for the care and dieting of the patients. They had to be present at medical visits and at the issue of medicines and meals. Principles, which continue to be recognized as important principles in regard to field medical service, were also laid down in these regulations. For example, men were prohibited from leaving the ranks during battle to carry a wounded officer out of range of fire. Only non-combatants were allowed to do so. The company and regimental *Feldscherer* were ordered to form aid posts out of the range of musketry and to send lightly wounded back to the ranks after their wounds had been dressed. Camp hygiene was carefully regulated, and rules were laid down for digging, marking and filling up latrines. Latrine and refuse trenches were to be placed 100 paces at least distant from cook houses and canteens. Wells and water supplies in the neighbourhood of camps were protected by sentries, and the general cleanliness of the camp supervised by inspecting officers.

These regulations were followed by improvements in the position and qualifications of medical officers. In 1751 the *Feldscherer* were appointed only after special training and examination. In 1752 the name regimental *Feldscherer* disappeared, and the title *Regiments-Chirurg* was introduced in its place. In 1754 Maria Theresa issued a special order granting the rank of captain to the staff surgeon and of

lieutenant to the regimental surgeon, and protecting these medical officers from punishments or deprivation of posts or rank except by court martial, "inasmuch as persons whose duty is to preserve so many thousand men in a state of health cannot be sufficiently honoured." *

At this time the medical officers were divided into three classes, (1) *Stabschirurgen*, (2) *Regiments-Chirurgen* and (3) *Subalternen-Chirurgen*, who retained the title of *Feldscherer*. Gerhard van Swieten, the medical adviser and body physician of Maria Theresa, took drastic measures to ensure their being possessed of proper qualifications and in 1756 instituted a rigorous examination, conducted by two of the senior surgeons, the professor of surgery, the professor of anatomy and the senior member of the medical faculty in Vienna and himself, before the diploma of master of surgery was granted and the medical officer entitled to hold rank as regimental surgeon. These reforms were not favourably received by the army at large. They interfered with the privileges and vested interests of the officers, who engaged men as servants at a low rate of wages on the understanding that they would eventually obtain certificates from the regimental surgeons entitling them to become *Feldscherer*. Van Swieten exposed the iniquity of this system, quoting examples, in an outspoken memorandum dated 27th February, 1759, in reply to accusations brought against him by officers in consequence of the unpopularity of his reforms. He stated bluntly that the *Regiments-Chirurgus* was the master of the *Feldscherer* and he alone was to judge of his suitability to act as the medical officer's assistant.

During the Seven Years' War (1757-1763) the field medical service was governed by the regulations of 1749, to which reference has just been made. Principles of evacuation of sick and wounded were then introduced, and those only who required prolonged treatment were permitted to be sent away from the regiments. Certain villages near the front line were named in orders as collecting posts to which wounded were to be sent from the regiments and there classified, cleanliness of camps was enjoined and detailed rules regarding latrine and refuse trenches and the burying of animals were issued ;

*" *Indem nicht genug verkehren kann Leute, die die Conservation so vieler tausend Menschen besorgen.*" (Quotation by Kirchenberger from pamphlet published in Vienna, 1863, on the reform of the medical service of the Austrian Army.)

the *Feldscherer* were instructed to search the field everywhere and dress with the utmost care the wounded of the enemy as well as the wounded of their own army. Arrangements were made for transport of sick and wounded in organized convoys under the care of officers, medical officers and assistants, from the front to field hospitals, with arrangements for sheltering and feeding the patients at resting places on the way. Six field hospitals, (four in Bohemia and two in Silesia), were established for their reception, and placed under the charge of a field officer, a captain and a subaltern. These officers were appointed in consequence of the difficulty in finding medical officers capable of commanding the units. The field officer commanded the hospital, the captain had charge of the arrangements for the reception of the patients, for their distribution and final return to their regiments on recovery, and the subaltern was responsible for receiving, taking care of, and on recovery restoring to them their clothing, arms and equipment. Notwithstanding the apparent excellence of these arrangements, they do not appear to have been sufficient or to have been properly carried out. For example, "in 1760 after the battle of Torgau, 3,000 wounded were led hither and thither for six whole days without food and without medical assistance."*

A new edition of the service regulations was issued in 1769, but, beyond introducing a new grade of medical officer, namely the battalion surgeon, between the regimental surgeon and the company *Feldscherer*, and systematizing the use of the men unfit for full military duties as sick attendants, they did not materially alter the medical service.

The period between the close of the Seven Years' War and the declaration by France of war against the King of Bohemia and Hungary in 1792† was marked by the war of the Bavarian Succession in 1778-1779, the mobilization against Holland in 1782, and the campaign against Turkey in 1788. It was a period which had far-reaching effects on the army medical service. Maria Theresa had throughout her reign shown constant and enlightened interest in all matters affecting the sick and wounded, while her successor, Joseph II, who was appointed Emperor as co-sovereign with her in 1770 and had acted as

* Kirchenberger, *op. cit.* p. 170.

† The title of Emperor of Austria was not assumed by the hereditary Emperors of Germany until 1804, after the house of Hapsburg-Lorraine had lost its possessions in Germany.

chief of her army throughout the Seven Years' and subsequent wars, was intimately acquainted with the conditions which arose from a medical service inadequate in numbers, education and training. He had as his body surgeon, and subsequently from 1778 onwards as head of the army medical service, Johann Alexander Brambilla, a name which in Austria-Hungary, along with that of Sax, holds the same high position in the history of the army medical service as the names of Larrey and Percy in France, Goercke in Germany, and McGregor in Great Britain. Joseph II, with the advice and aid of Brambilla, completely transformed the character and training of the army medical service by the establishment of army medical schools and by a field medical organization, the general principles of which are practically those adopted in modern armies at the present day.

With regard to medical schools, an army medical school for the Austrian medical service had already been established in 1768 in Brussels on the proposal of the Duke of Lorraine and on the advice of Van Swieten, and in 1775 courses of instruction in the practice of medicine and therapeutics as affecting the army medical service were instituted in the military hospital at Gumpendorf, a suburb of Vienna. These efforts at technical education were not considered sufficient either by Maria Theresa or by Joseph II, and the latter issued an order in 1776 to the effect that "no one could hold any medical appointment in the field army who had not studied anatomy, as the one science upon which field surgery was based." During the war of the Bohemian Succession he was so impressed with the defects of the military organization that he ordered a detailed report to be submitted to him with suggestions for remedying them. In no branch of the military administration, says Kirchenberger, was the need of reform more urgently exposed in these reports than in the field medical service.

The first steps taken towards reform were to extend the course of instruction in the Gumpendorf military hospital to two years, so as to embrace surgery as well as medicine, to construct a special building for lecture rooms, library and museum, and to send a number of selected field surgeons to study in France and England. The requirements of this army medical school soon became so great that an entirely new school and a military hospital were ordered to be constructed in Vienna itself. They were finished and opened in 1785, and a series of prizes

instituted, some of which exist to the present day. The hospital was built for 1,200 beds, and is the building in Vienna existing to-day as No. 1 Garrison Hospital, while the school building is the famous "Josephinische Medicinischchirurgische Akademie," or "Josephinum," as it was called, which now forms the Army Medical College (*Militärärztliche Applikationsschule*) in the Währingerstrasse. The school at Brussels was finally closed in 1784 in consequence of the establishment of these new schools of instruction in Vienna.

To bring to a close here the first stage in the history of the Austrian Army Medical College, it may be stated that it passed through much the same kind of experience as the analogous institution, the "Pepinière," afterwards the "Friedrich-Wilhelms Institut," in Berlin. Its opponents were chiefly the Vienna University professors, just as the Berlin University threatened the existence of the "Friedrich-Wilhelms Institut." They objected to the plan of study, to the granting of diplomas after a two years' course of study, and above all to the tendency of the school to place surgeons in the same scientific category as physicians. The Napoleonic wars, which came shortly after its institution, led to a dearth of students and to interruptions in its courses of study; eventually, in 1820, under the influence of one of its bitterest opponents, Freiherr v. Stifft, the body physician of the Emperor Francis I., the courses of lectures were stopped, and the school closed for an indefinite period by Imperial order.

The influence of the reign of Joseph II on field medical organization was shown first in the establishment, in 1781, of a number of military hospitals throughout his territories, for example in Milan, Mantua, Theresienstadt, Königgrätz, Lemberg, and Hermannstadt, in addition to No. 1 Garrison Hospital in Vienna,* and the conversion of the Jesuit Colleges in Prague, Pest, Brunn, and Olmutz into military hospitals. In 1782 a large army, over 400,000 strong, was concentrated in Bohemia for operations against the Netherlands. The lesson taught by the campaign of 1779 was to the effect that the old principle of

* It is interesting to note that in 1784 regulations for this hospital were published, in which the subordinate personnel was to consist of N.O.O.'s as ward masters, sick attendants specially trained as nursing orderlies, and servants (*Spitalsknechte*) as general duty orderlies. The nursing orderlies were obtained from soldiers who were unfit for full combatant duties, as already noted.

treating sick and wounded as near their regiments as possible led to all kinds of neglect and distress, and in the mobilization arrangements of 1782 entirely new principles of field medical organization were laid down. Three classes of field hospitals* were organized:—(1) Local hospitals, (2) Mobile hospitals, and (3) Main hospitals. The local hospitals were intended only for the very slight cases of illness and for cases too seriously ill to be moved. They were to be established, as before, in the villages as near the fighting units as possible. The mobile hospitals, called *fliegende Spitäler*, were to be opened in places the selection of which was to depend on the position of the army. Wooden huts were to be prepared and erected by military carpenters for the accommodation of patients in these hospitals. They were to be used for the patients who required more careful but not necessarily prolonged treatment; and who were to be sent back from their units. The third class of hospitals, or *Hauptspitäler*, was for the chronic cases and cases requiring a long course of treatment. The selection of the place for establishing them was determined by the existence of suitably healthy sites and surroundings and large roomy buildings such as castles, riding schools, etc., in the locality. As an example of the extent to which field hospitals were organized in connexion with the mobilization of the army for war against the Netherlands, accommodation for 7,042 sick was provided in castles and other buildings in Bohemia and for 7,500 in Moravia. The requirements were based on a normal sick rate of 5 per cent., a proportion which excluded exceptional sickness and the occurrence of large numbers of casualties in battle.

In connexion with this mobilization scheme certain principles were laid down regarding the proportion of medical personnel to troops and to sick. The proposed establishment of medical officers for the army, which numbered over 400,000 men, was 557 exclusive of medical personnel with units. Thus the headquarter staff and lines of communication had 28 medical officers or assistants of various ranks, the field hospitals 431, and the transport 98. The basis of calculation for field hospitals was 10 senior medical officers and 200 assistants for every 5,000 sick.

* It should be noted that the expression "Field hospital" (*Feldspital*) means any hospital organized in connexion with warlike operations and not necessarily a mobile medical unit.

The main principle upon which these medical preparations were based was the outcome of the experience of the war of the Bavarian Succession and previous wars, and was to the effect that armies were greatly hampered by retaining with them, or in their neighbourhood, sick and wounded requiring prolonged treatment. The mobile and other field hospitals were intended to form a series of hospitals on a long line of evacuation for such cases, in order to remove them as far away as possible from the zone of hostilities and give them at the same time better opportunities of treatment under conditions free from anxiety or disturbance. The lessons learned at this period have never been forgotten in Austria-Hungary; they were, in fact, the starting point of the elaborate and carefully planned organization of its medical service in more modern times.

Six years afterwards the campaign against Turkey took place, during which, it is stated, half the total force of Joseph II's army was inefficient on account of *typhus* and other fevers, dysentery and scurvy. Brambilla made strenuous and apparently effective efforts to combat these diseases and check their ravages. Scurvy disappeared after the special issue of vinegar, *Sauerkraut* and horse-radish to the troops. Special measures were taken to prevent the soldiers from drinking foul water. Regulations were issued to the effect that the water should be boiled and cleared by precipitation or filtered through linen or flannel cloth, and that vinegar should be added to it. The campaign is also noteworthy from the point of view of military medical history, because it is the first occasion in which portable huts were used for the accommodation of sick and wounded in the field. Owing to the lack of suitable accommodation in Slavonia and the Turkish Banat, 24 large hospital huts of woodwork, which could be put easily together, were constructed in Vienna by order of Joseph II, and these, together with complete hospital equipment, were sent down the Danube to the area of field operations; a method of providing hospital accommodation in war, which, as Kirchenberger states, has a century later received universal approval and application.

During this war, namely in 1788, the first part of "Regulations for field surgeons in peace and war" was issued. They were more or less a systematizing of the arrangements made during the mobilization in Bohemia in 1782. They affected the establishment, ranks and grades of medical officers and

subordinate personnel for medical services, the organization and command of military hospitals in peace, the direction of the medical service in war and method of employing it during battle, the supervision of dispensaries and field depots of medical and surgical stores, and the supply of medical and surgical equipment. The senior field surgeon was placed at the head of the medical service with the title of *Protochirurg* and with the attributes of body surgeon to the Emperor, director of the "Josephs Akademie" and inspector general of military hospitals. The next ranks were staff-surgeon (*Stabschirurg*), regimental surgeon (*Regimentschirurg*), battalion surgeon for infantry battalions (*Bataillonschirurg*), junior battalion surgeon for grenadier battalions (*Unter-bataillonschirurg*), senior surgeons for cavalry and special corps (*Oberchirurg*), and junior surgeons in charge of the subordinate medical personnel (*Unterchirurg*).

The subordinate personnel was to consist of non-commissioned officers as wardmasters and sick attendants, who, as before, were "half invalid" soldiers. The proportion allowed in military hospitals in peace was 1 sick attendant for every 5 severe cases, every 10 light cases and every 20 convalescents. One wardmaster was allowed for every 6 sick attendants. The senior medical officer was placed in charge of the hospital, so far as its technical management and the command of medical and apothecary personnel were concerned, but a combatant officer was made hospital commandant with command over the non-commissioned officers and sick attendants. In war, the field hospitals were placed under the command of staff surgeons, one staff surgeon being appointed for every 400 patients. For every 100 to 150 patients an *Oberchirurg*, 4 *Unterchirurgen* and 4 civil surgeons were placed under him. The *Protochirurgus* became director of medical services of the army, and a *Feld-Stabschirurgus* was appointed to act under him as principal medical officer of each wing of the army, or of any independent column.

With the exception of some changes in the method of supplying drugs, as for example, the replacing of purveyors by government officials for purposes of supply and the issue of a military pharmacopoeia in 1796, no further changes of material interest were made until the commencement of the nineteenth century.

In 1802 the title *Chirurg* in the ranks of medical officers was changed to that of *Arzt*, a designation which has been retained ever since. Practically this was the only change that occurred during the earlier wars with France at the close of the 18th and beginning of the 19th centuries. But the experiences of these wars found expression in the issue of regulations in 1808 to replace those of 1788-89.

The regulations of 1808 affected the whole of the army medical service, medical personnel, subordinate medical personnel, medical organization for peace and war, and medical supplies. The training and educational establishments alone were untouched. As regards medical personnel the changes were associated with the definite formation of an Army Medical Service, or "*Feldärztliche Branche*" as it was called. The *Protophirurg* became the *Oberstfeldarzt*, and the other ranks in order of precedence were *Stabsfeldarzt*, *Regimentsfeldarzt*, *Oberarzt* and *Unterarzt*. As yet no relative or other rank was assigned to them. The total establishment of medical officers in time of peace at this period was 1,698, of whom 40 were staff surgeons and 120 regimental surgeons. In each regiment there was as a rule one regimental surgeon, 2 to 4 *Oberärzte* and a varying number of *Unterärzte*. In the German, Hungarian and Transylvanian infantry regiments, for example, the establishment was 1 regimental surgeon, 3 *Oberärzte* and 9 *Unterärzte*. The subordinate personnel was graded as non-commissioned officers for supervision, senior sick attendants for wardmaster duties, sick attendants, and general duty orderlies. They were recruited either directly as civilian employés, from 'half invalid' or 'invalid' soldiers, or from the rank and file who might be put on special duty in hospitals.

The military hospitals in time of peace were to be of two kinds, garrison hospitals and regimental hospitals. The former had a complete staff of their own and were established in Vienna, Graz, Laibach, Prague, Milan, Mantua, Padua, Verona, Karlsburg, Pest, Komorn, Temesvar, Peterwardein, Hermannstadt, Cattaro and Ragusa. The latter were established in the other garrison towns with a personnel drawn from the regiments in garrison. The command of the military hospitals was given to a combatant officer, and a committee of management was appointed consisting of the commandant, the senior medical officer, and a commissariat officer. Quartermasters, paymasters and chaplains were

appointed to garrison hospitals in proportion to the number of patients.

The war organization under the 1808 regulations was to the effect that a *Stabsfeldarzt* became director of medical services and a field hospital administration committee, consisting of a general officer, a *Stabsfeldarzt* and a commissary, supervised the field hospitals. These hospitals were to be of three kinds, namely:—(1) Receiving hospitals (*Aufnahms-spitäler*) in the immediate neighbourhood of the army; (2) Intermediate or auxiliary hospitals (*Unterlagsspitäler*); and (3) Main hospitals (*Hauptspitäler*).

The receiving hospitals were placed a few hours distant by road from the fighting line, and were supplied with hospital equipment and beds for 400 patients each. The number of this class of hospital was to be 60; and the establishment was a captain as commandment, 3 officers for administration, charge of stores, supervision of men, etc., 1 accountant, 4 supply officials, 10 non-commissioned officers and 100 sick attendants. This personnel was supplied from amongst retired officers and men unfit for service with fighting units, or from the reserve. The medical duties were carried out by medical officers from the army corps to which the hospitals were assigned.

The intermediate or auxiliary hospitals were placed between the receiving and main hospitals. They were organized for 800 beds, with a personnel of a captain as commandant, 4 officers for supervision, 2 for administration, 2 staff surgeons or regimental surgeons, 40 subaltern surgeons (8 *Ober-* and 32 *Unter-ärzte*), 2 chaplains, 1 accountant, 6 supply officials, 24 non-commissioned officers, and 160 sick attendants.

The main hospitals were organized for 1,000 beds, with a personnel similar to that of the intermediate hospitals, but with 50 instead of 40 subaltern medical officers, 30 non-commissioned officers, and 200 sick attendants.

The number of these hospitals was determined by the number of army corps and strength of the army. Special rules were laid down regarding the duties and conduct of the hospital. Amongst others each bed was to have a minimum of 25 square feet superficial space.

The removal of sick and wounded to these hospitals was also carefully organized. Bearer companies were formed to remove the wounded on stretchers to dressing stations, which were opened as regimental establishments. For transport to

the receiving hospitals, wagons of all kinds, suitably prepared for transport of wounded, were collected and drawn up at the dressing stations under officers and men of bearer companies, and, when 50 to 100 wounded had been through the surgeon's hands and ready for removal, they were taken over by this personnel and conveyed in convoys to the receiving hospital. From the receiving hospitals they were evacuated in a similar manner through the intermediate to the main hospitals. Waterways were used for evacuation as much as possible, the wounded being placed under cover on barges and boats. Thus a complete system of evacuation on the principles now accepted in most armies was formulated in these regulations of 1808; indeed, one of the outstanding features of the Austro-Hungarian medical service, both in the campaigns which followed, especially in the Italian campaigns of 1848-49 and 1859, as well as in its military medical literature of the present day, is the highly organized system of evacuation of sick and wounded from the battlefields to permanent or fixed hospitals.

The regulations of 1808 also improved the methods of providing medical and surgical equipment for the army. In Vienna a central depot for medical and surgical stores was maintained under the director-general of the medical service. Medicines were prepared there, stored, and issued as required to medical stores in the provincial capitals, and from there to the regimental units and hospitals. Garrison dispensaries were opened at the hospitals and in fortresses. Mobile field dispensaries were attached to the field hospitals, with a personnel of 1 pharmacist in charge, 2 assistants and 2 laboratory workers. One 4-horsed wagon carried the medical and surgical stores, one 2-horsed wagon the personnel, and three 4-horsed wagons the other requirements of these mobile dispensaries. A mobile field dispensary was also attached to the headquarter staff of the army. In addition to the mobile dispensaries, there was a base or main depot of medical and surgical stores in the field with two auxiliary depots, from which the regimental units and hospitals were supplied. The auxiliary depots were opened for this purpose at a distance of 8 or 10 miles behind the right and left wings of the army. The base depot was brought up to a similar distance behind the auxiliary depots, and had to follow the movements of the army. All these depots were supplied with Government transport.

The period which followed the issue of these regulations, namely from 1809 to the end of the Napoleonic wars in 1814, introduced few material changes into the army medical organization, although in the field medical service some improvements were made. There was one important change, however. In 1809, for personal reasons and not as a matter of principle, the director-generalship of the army medical service was taken out of the hands of the *Oberstfeldarzt*, Dr. von Bienenburg, and given to a civilian official, who was not a member of the medical profession. It remained in his hands till 1853. "It is not surprising," writes Kirchenberger, "that it was just during this period that the development of the army medical department and army medical service remained at a standstill, although the medical officers of the period had a claim to better conditions in their position both from a service and material point of view in consideration of the high scientific training which they had gone through in the Josephs-Akademie." Quoting Ritter von Kraus, a subsequent Director-General, he goes on to say that the layman could not enter into sympathy with a service to which he did not belong, and had not the necessary practical knowledge of military medical administration and the conditions under which the army medical officers worked to enable him to grasp the true meaning of the reforms which were needed and to see them carried out.

During the period 1809-1815 the field medical organization was tested by the campaign against Napoleon in 1809, the campaign against Russia as allies of the French in 1812, and the subsequent campaign during the War of Liberation in 1813-1814. As already noted, bearer-companies (*Sanitäts-Compagnien*) were organized in the 1808 regulations as special detachments for removing the wounded from the fighting line to dressing stations, and from there to the field hospitals. They were to be formed, however, *ad hoc* only when war broke out. In the campaign of 1809, therefore, they were employed for the first time. They were composed of officers and men of the "half-invalid" establishment of regiments. In this campaign the arrangements for evacuation of wounded seem to have worked well, especially under the direction of Josef Sax, the principal medical officer of the 6th Army Corps. Each receiving hospital had several covered wagons on springs attached to it for transport of wounded to it from the battlefield. With each wagon there were 20 field stretchers. In addition

a large number of other wagons was collected and kept ready at the receiving hospitals for transport of wounded to the intermediate hospitals. Nine hospitals were estimated as the requirements for a force of 60,000 men. By order of the Army Council of the time they were to be placed on or near the main lines of supply, either by road or water, and the empty supply wagons were to be used on the return journey for transport of wounded. As a rule the receiving hospitals were placed a day's march behind the troops which they served. Sax received special commendation for his efforts and medical work at the battle of Aspern. In a force of 80,000 there were 16,213 wounded and 4,287* killed. He found the dressing stations placed at too great a distance from the fighting line, and, consequently, he concentrated the medical officers of his army corps and brought them himself up to the fighting line, where first aid was administered to the wounded close to where they fell. It took three days to dress all the wounded in this battle.

The Austrian contingent in the Russian Campaign in 1812 consisted of 32,000 men under Schwarzenburg. Sax was appointed principal medical officer, and again displayed unusual energy and skill in arranging for the evacuation of wounded and for the mitigation of disease. 50 two-horsed wagons, one bearer company, and 4 field hospitals formed part of the field force; Sax obtained sanction and funds for converting the wagons into special wagons with seats for carrying the more lightly wounded sitting up, or into wagons with special apparatus for fractures of the lower extremity. For transport of severe wounds of the abdomen, thorax and head, a thick bed of straw was placed in the wagons. The majority of the wounded from the battles of Wolkowisk and others in which Schwarzenburg was engaged were evacuated to Warsaw. Severely wounded who were unfit for transport were left to the care of the inhabitants of the villages near the battle-fields.

Sax was again the moving spirit in all matters connected with the medical service during the War of Liberation. The Austrian organization for dealing with masses of wounded and evacuating them to fixed hospitals was indeed studied and imitated in the armies of Prussia and Russia, which formed

* According to Bodart the numbers are 16,300 and 5,200, but these figures include the action at Essling.

with Austria the allied army against Napoleon. In the operation orders of the period the position of the mobile receiving hospitals was noted for general information, and the hospitals were detailed to which each division was to send its sick. Main hospitals were established at Prague and Nimburg during the strategical concentration; and sick were evacuated from the receiving hospitals to one or other of them. During the campaign regimental or local hospitals (*Marodenhäuser*) were opened in camps and cantonments for the reception of light cases of sickness and men unfit to march in the ranks; extra food and wine were added to the rations there. During an engagement a main dressing station was opened and its position indicated by an orange coloured flag. A *Stabsarzt* was attached to each wing to direct the medical arrangements during the fighting and to establish dressing stations. He was given 15 ambulance wagons, 3 wagons with food, 1 wagon with eating and drinking utensils, 1 wagon with dressing material, and half a bearer company. Two combatant officers accompanied him for the purpose of helping in the establishment of an ambulance and a dressing station. The position of the field hospitals to which these should evacuate was made known, as already stated, in army operation orders. During the battles of Dresden, Culm and Leipzig the main hospitals (*Hauptspitäler*) were established at Dresden, Teplitz and Prague.

Sax's efforts again received the highest commendation and reward. After the war he took the opportunity of bringing to the Emperor's notice the eminent work performed by the whole of the medical officers, and appealed for an improvement in their position. Although his recommendations were supported by Schwarzenburg, nothing was done, and the position of army medical officers practically remained unchanged during the long period of peace that elapsed between the close of the Napoleonic wars and the outbreak of the revolution in the Austrian Empire, followed by Radetzky's Campaign in Italy in 1848-49. Changes were made, however, in connexion with the education of medical officers and subordinate personnel, and in hospital administration. As already noted, the Army Medical School was closed in 1820. It was not long, however, before a re-organization of the courses of studies in it was formulated, and it was re-opened in 1824 with *Oberstfeldarzt* Prof. Isfordink as director. Two courses of study were instituted, a five years' course for

qualification as doctor of medicine and surgery and master of midwifery, and a two years' course for master of surgery. The courses were, in fact, assimilated to those of the University of Vienna, and in 1825 it was laid down that only those who had qualified in all branches of the higher course were to be appointed to the rank of *Oberarzt* (senior subaltern medical officer) and upwards. In 1833 the shorter course for masters of surgery was extended to three years. Isfordink died in 1841, and was succeeded by Prof. Bischoff as director of the school.

The education and training of subordinate medical personnel was systematized during this period by the issue, for the first time, of an "Introduction to the theoretical and practical instruction of nursing orderlies,"* in connexion with regulations for sick attendants in military hospitals published in 1838.

As regards the military hospitals themselves, the garrison hospitals, established as already noted in various parts of the empire and monarchies, were gradually converted during 1829 to 1840 into regimental hospitals, in order to place the hospitals under regimental administration as regards provision of sick attendants and rations. Only one garrison hospital was allowed to remain as such, namely Garrison Hospital No. 1 in Vienna. At the same time hospitals for slight cases of sickness (*Marodenhäuser*) were established, where all but the severer cases of sickness could be treated without special diet. They were, in other words, non-dieted hospitals. The differentiation of military hospitals into these three classes, namely, garrison hospital, regimental hospital, and non-dieted hospital, has remained a feature of the Austro-Hungarian army medical organization ever since.† In 1838 a special institution (*Militär Badehaus*) was founded at Carlsbad for officers, as a military *Kurhaus*. It had accommodation for 7 officers with their servants. Also in the civil hospital there, a ward with 4 beds was kept for non-commissioned officers and men sent to Carlsbad for the waters. This was the beginning of the system of providing accommodation for officers and soldiers at watering places in the monarchy; and similar arrangements were made at Marienbad and elsewhere about this time.

* "Anleitung zu einem theoretisch-praktischen Unterrichte für die eigentlichen Krankenwärter."

† See Chapter II., p. 55.

The first step towards improving the official position of the medical officers was taken in 1845, when the official placed at the head of the medical service in 1809 was ordered, through the representations of Isfordink and his successor Bischoff, to put forward proposals for its reorganization. The scheme was shelved until the pressure of the revolution of 1848 forced the Army Council to give effect to the proposals. In a decree of 11th March, 1848, medical officers were graded as follows, but without relative rank, except in the higher ranks, the peace establishment being as noted; 1 *Oberstfeldarzt*, 27 *Stabsärzte*, 127 *Regimentsärzte*, 424 *Oberärzte*, 86 *Oberchirurgen*, 1,074 *Unterchirurgen*. New rates of pay were also fixed, which were far from liberal as compared with the pay of other branches of the service. Universal dissatisfaction was created in the medical service by this scheme of re-organization. It was regarded as a scheme displaying not only indifference to the interests of medical officers but also actual hostility to the army medical personnel.* It was pointed out that the total pay of 1,739 medical officers amounted to 505,840 florins, while 189 officers of engineers received 233,264 florins and 214 commissariat officials 234,600 florins.

The condemnation of the scheme and the necessity of obtaining medical officers for the war thrust upon Austria by the rising in Italy and Hungary caused the Emperor, Ferdinand I, to issue in August of the same year a revision of the March decree, granting officer's rank, honours and privileges to the medical officers. The *Oberstfeldarzt* was given the rank of *General-major*, certain senior *Stabsärzte* that of lieutenant-colonel, other *Stabsärzte* became majors, *Regimentsärzte* captains, the senior half of the *Oberärzte* lieutenants, and the junior half 2nd lieutenants. *Oberchirurgen* were given the privileges and honours of officers with the badges of the lowest rank of officer, but no relative rank. Various other concessions were made to improve the position of the medical officer. For the time being the army medical service was content, but some of the effect of the new privileges was whittled away in 1849 by distinguishing the different grades of medical officers' rank by braid on the collar of the tunic, in the same manner as non-commissioned officers were distinguished, and not by stars as in the case of the officers. It was not until 1854, after the direction of the army medical service had again come into the

* Kirchenberger quoting Ritter v. Kraus, p. 25 *op. cit.*

hands of the *Oberstfeldarzt*, that this source of discontent was removed. In the following year, however, this concession was toned down by withdrawing the relative rank granted in August, 1848.

In the meantime Radetzky was carrying on his campaigns in Italy during 1848 and 1849. He appointed his staff surgeon, *Regimentsarzt* Wurzian, to be director of medical services and *Regimentsarzt* Romer to be director of hospitals. The work of both these medical officers was highly praised. Bearer companies were organized in the proportion of one company in three sections for each army corps, with 6 one-horsed ambulance wagons and 1 material wagon to each section. Fifteen field hospitals were rapidly equipped and sent into the field. The medical personnel was in the proportion of 1 per cent. of the strength of the army. There was much sickness, amounting in the middle of August to 24,000 cases, chiefly intestinal troubles, typhus and cholera. Radetzky fully recognized the work done by his army medical service and specially praised the orderliness and cleanliness of the field hospitals.

In the years between the revolution of 1848-1849 and the last decade of the nineteenth century Austria-Hungary passed through several periods of war. In 1859 it was engaged in the Italian campaign, during which were fought the battles of Magenta and Solferino; in 1864 there was the campaign in Schleswig Holstein, and in 1866 the campaigns in Bohemia and Moravia and in Italy. Subsequently affairs in the Balkans led to the occupation by Austria-Hungary of Bosnia and Herzegovina in 1878, and to the suppression of the rising in these territories, and in Dalmatia in 1882. The experiences of the revolution and this succession of campaigns created considerable changes in the field medical organization. In 1850 regulations were issued regarding the duties of bearer companies in the field, in which bearer squads of 10 to 12 men, with 2 or 3 stretchers, were organized for work in the fighting line. Dressing stations were established, half an hour's journey further back, and distinguished by an orange coloured flag by day and a distinctive lantern by night. Four mounted orderlies were attached to the bearer company for inter-communication purposes and for clearing the way to bring them forward, when required, towards the fighting line. Various other details were introduced into the regulations of 1850, which show that the organization of the first line

of medical assistance was then carefully thought out and planned. In 1857 field hospitals were re-organized. The old intermediate hospitals (*Unterlagsspitäler*), were abolished, and only two classes, namely, mobile field receiving hospitals, (*bewegliche Feld-Aufnahmsspitäler*), and field hospitals, (*Feldspitäler*), retained. But the former were divided into two sections, an ambulance section for 150 sick and wounded, and the receiving hospital proper for 500. It was thus partly an expansion of the old receiving hospital, so as to retain its original form and provide at the same time an advanced or emergency field hospital, such as the bearer companies were in the habit of improvising, and partly an attempt at filling the gap caused by the abolition of the intermediate field hospital. The field hospitals proper were organized for 500 beds. Three hospital echelons were thus retained, namely, the ambulance, the receiving hospital, and the field hospital.

This mid-century decade between the revolution and the Italian War of 1859 is also marked by important changes in the history of the higher administration of the army medical service, the army medical school, the organization of military hospitals in peace and their subordinate personnel. Mention has already been made of the fact that from 1809 until 1853 the direction of the army medical service remained in the hands of a civil official who was not an army medical officer. In 1853 its administration was made an integral part of the military administration as the 7th section of the 3rd department in the War Office. The *Oberstfeldarzt* of the army became the head of the section, and had the direction of all matters connected with army medical service, appointments, inspections, construction and administration of hospitals, supply of medical and surgical stores, and medical educational establishments. This was followed in 1855 by a change in the ranks and pay of the army medical officers. The *Oberstfeldarzt* became *Generalstabsarzt*, and the other ranks were *Oberstabsarzt I Classe*, *Oberstabsarzt II Classe*, *Stabsarzt*, *Regimentsarzt* 1st and 2nd Class, *Oberarzt* and *Oberwundarzt*. There were also *Unterärzte* and medical assistants (*Feldärztliche Gehilfe*) who ranked not as officers but as staff officials. The first to hold the rank of *Generalstabsarzt* was Dr. Johann Traugott Ritter von Dreyer. He was given a military medical committee or advisory board (*Militär-Sanitäts-Comité*), which took the place of the former *Feld-Sanitäts-Commission*, and which was formed of senior

medical officers and professors at the army medical school. The ranks carried with them the relative rank of major-general, colonel, lieutenant-colonel, major, 1st and 2nd class captain, lieutenant and second lieutenant respectively, until 1857, when in a statute reorganising the army the medical officers were no longer placed in the category of officers but in that of officials.

As regards the *Josefs-Akademie*, it was first of all, in May 1848, amalgamated with the medical chirurgical section of the University of Vienna, and five months afterwards closed, on account of the paucity of candidates for admission to the army medical service. The university took over the buildings, library, botanical gardens, and museum. Special military medical instruction was then organized for young medical officers in the Vienna garrison hospital and elsewhere, but this unsatisfactory state of affairs was altered in 1852 by the opening of an army medical institute in the old *Josefs-Akademie* building. Representations were then made to the Emperor, Francis Joseph I., showing how unsatisfactory, as regards the supply of medical officers to the army, was the amalgamation of the *Josefs-Akademie* with the University; they resulted in the re-opening of the institution as an army medical school under its old name of *Josefs-Akademie* in 1854. The courses were, as formerly, a five-year course for qualification as doctors of medicine, etc., and a three-year course for the ranks below that of *Oberarzt*.

The changes which took place in the peace organization of military hospitals between 1848 and 1859 consist of the re-establishment of several garrison hospitals,* the organization of a special army medical corps of subordinate personnel for training as bearer companies in war, and the systematizing of subordinate personnel for the military hospitals. Three army medical battalions, including 14 army medical companies, were formed in 1850. The composition of a company was 1 captain in command, 3 subaltern officers, 1 *Oberarzt*, 15 non-commissioned officers, and 216 men. The number of the companies corresponded with the number of the 14 army corps. The headquarters of the army medical battalions to which they belonged were in Vienna (No. 1 Battalion), Verona (No. 2), and Budapest (No. 3). These companies were

* The new garrison hospitals were in Graz, Innsbruck, Prague, Olmütz, Theresienstadt, Milan, Verona, Mantua, Venice, Trieste, Temesvar, Peterwardein, Hermannstadt, Lemberg, Cracow.

recruited by voluntary enlistment or transfer from regiments, and were to be composed of Germans, Slavs, Magyars and Italians, in equal proportions. A new edition of the guide to the instruction of the medical corps subordinate personnel was issued at this time. In addition to the formation in this manner of a special army medical corps in peace, non-commissioned officers and men were appointed from regiments for duty and training as nursing orderlies in military hospitals. The garrison hospitals as a rule were given 1 warrant officer and 8 to 9 non-commissioned officers of the special army medical corps as permanent establishment, while from each regiment 2 non-commissioned officers were placed on duty in the hospitals for periods of six months at a time. These were obtained from recruits and volunteers amongst those men of the regiments who had defects which interfered with their performing full duty as combatant soldiers, in the proportion of two per company or squadron for each garrison hospital. The establishment of these nursing orderlies was 100. Fifty of them were to be mobilized for each field hospital, which the garrison hospital in question had to equip in time of war, and each regimental unit had to place at the disposal of the garrison hospital, for providing the necessary number of non-commissioned officers, half of the men in the unit trained as nursing orderlies.

In 1857 fresh changes were made in the organization of military hospitals in peace. The number of garrison hospitals was gradually increased to 28. Regimental hospitals, called *Truppenspitäler*, remained in garrisons, which had no garrison hospital, and were divided into regimental, battalion and divisional hospitals; they were attached to the unit which provided the commandant, and had a personnel of men who were placed on duty at the hospital from the units in the garrison for 3 months at a time. In addition, *Marodenhäuser* or local hospitals for slight cases of sickness were opened, whenever there was insufficient accommodation in the other hospitals or when, in connexion with the temporary occupation of localities by troops, hospital accommodation of a temporary character had to be provided. There was also the class of military medical institution at health resorts called *Militär Badehäuser* or bathing establishments.

In 1859 the chief interest in the history of the medical service of Austria-Hungary centred in the Italian campaign. During this campaign large numbers of sick and wounded

accumulated in Verona, Vicenza and other places, especially after the battle of Solferino. Great embarrassment, confusion and distress were caused thereby. To relieve this state of affairs an organization for distributing the patients to the various permanent hospitals in the home territory was introduced for the first time in the history of the field medical organization. This was carried out under the direction of *Oberstabsarzt* Dr. F. Kraus, who afterwards became head of the medical service with the title of Ritter v. Kraus. The new principle of collecting, evacuating and distributing zones, which forms so prominent a feature in Austro-Hungarian field medical organization and has been imitated by most other armies, was thus established. In June 1859 between 4,000 and 5,000 officers and men of the Austrian force of 60,000 who fought at Magenta, and, in the same month, about 10,500 out of the 152,000 who fought at Solferino, were wounded. They accumulated, as already stated, chiefly in Verona and Vicenza, until Kraus established order out of chaos by arranging lines of evacuation by road, rail and water to Botzen, Innsbruck and Salzburg, to Laibach, Graz and Vienna, to Venice and Trieste, using parallel or divergent lines, and forming collecting stations along the routes, from which wounded were further distributed in different directions. The results of this system were in every respect advantageous, for the mortality rates, the usual diseases of campaign and infectious diseases were materially lessened. Altogether 48,713 sick and wounded were thus evacuated and distributed to hospitals in the home territory during the campaign.*

In the period following this campaign and until after the campaigns of 1864 and 1866, no important changes affecting the position of army medical officers or the administration of the medical service took place, although some changes, including the abolition of the short course of study, were carried out and other changes foreshadowed by a renewal of the attacks against the army medical school. With regard to the subordinate personnel for medical services, the unfavourable experience of the administration and organization of the medical corps during 1859 led to a re-organization

* An account of the system of distribution is given by Ritter von Kraus in his volume, "*Das Kranken-Zerstreuungssystem*," published in Vienna in 1861.

of the corps in 1860, by which the whole corps was administered by a single inspectorate at Vienna, and the number of companies was reduced to 10, each consisting in peace of one captain, three subalterns, one *Regimentsarzt* and 184 non-commissioned officers and men. In war the strength of each company was increased by the addition of one lieutenant and 63 non-commissioned officers and men. Two dépôt companies were also formed at this time, for war only. Each company was given in peace 20 four-horsed ambulance wagons and 5 four-horsed material wagons of a new pattern, and 10 two-horsed wagons on springs of the old pattern for lying down cases, 10 four-horsed ambulance wagons of the old pattern for lightly wounded and men unfit to walk, and 5 four-horsed old pattern material wagons. These mobilized with the companies in war, and had 5 two-horsed supply wagons and one field forge added. Transport personnel was supplied by the transport department and formed a medical transport squadron.

In 1861 hospital assistants (*Spitalsgehilfen*) were organized to take the place of the old *Feldärztliche Gehilfen*. They were a higher and more educated class of subordinate. The system of providing an organized personnel for medical duties in each regimental unit and for the work of regimental stretcher bearers on the battlefield was introduced in 1862 in the form of brigade medical detachments, stretcher-bearers, and dressings orderlies. The brigade medical detachments were formed by men taken from the battalions comprising the brigade, and were entrusted with the duty of removing the wounded to brigade aid-posts. Each detachment consisted of 1 combatant officer in command, 1 non-commissioned officer from each battalion of infantry or rifles and 2 privates from each company. They wore as a distinctive badge a black and yellow brassard on the left upper arm. The men who formed these detachments were trained in peace in the proportion of two from each company of infantry yearly. The dressing orderlies were in addition to these stretcher-bearers and were trained in the proportion of two per battalion.

In connexion with this organization of regimental bearers, grouped together as brigade medical detachments in war, the organization of the medical corps, which was introduced in 1860, was again changed. The medical companies were reduced in strength and equipment in 1862, but so organized that in war one company was attached to each army corps.

and was divisible into four sections, one of which would be attached to each of the brigades forming an army corps, and would form a second line of assistance with ambulance transport and material behind the brigade detachments. The changes that were thus made in the Austro-Hungarian army medical service in 1862 are interesting in that they are the origin of the present organization, by which a regimental medical service and a special medical corps personnel are each distinct from one another and form definite echelons of work in the field.

The whole of the field medical service was further re-organized in 1864 before the campaign in Schleswig-Holstein, as a result of the unsatisfactory experience of the working of the old receiving hospital and field hospital system in 1859 and the necessity of recognizing the three zones of collecting, evacuating and distributing sick and wounded. The tactical unit at this time was the brigade, and in this re-organization each brigade was given a brigade principal medical officer, each army corps a corps P.M.O. and each army an army P.M.O. The medical units were distributed in three groups; group I contained the units of the collecting zone, group II those of the evacuating, and group III those of the distributing zone. The medical units and posts of the collecting zone were, in echelon from the fighting line backwards, the brigade aid-posts, the dressing stations and the corps ambulance. To the last the duty of arranging the transport of wounded to the evacuating (field) hospitals was assigned. Each army corps was given for this purpose one ambulance composed of 1 captain in command, a *Regimentsarzt* as senior medical officer, 4 other medical officers, 2 hospital assistants, 36 nursing orderlies, and transport personnel for ten 4-horsed ambulance wagons and four covered wagons with material. The second group consisted of field hospitals and field depots of medical and surgical stores. They were mobile units, belonging to army troops, in the proportion of 2 or 3 field hospitals and 1 depot to each army. The former were organized as before for 500 beds with a personnel of 7 medical officers, 9 hospital assistants and 100 nursing orderlies under the command of a captain and 3 subalterns. The third group consisted of convalescent depots, rest stations and the permanent garrison and regimental hospitals in the home territory.

The system was tried in the Schleswig-Holstein campaign. An army corps of four brigades, or a force of about 25,000

men, took the field, with a brigade medical detachment for each brigade, a medical company, corps medical reserves and corps ambulance for the corps, 3 field hospitals and 2 rest stations, which were to act as intermediate stations between the field hospitals and the places where there were fixed hospitals further back, namely in Hamburg and Neumünster at the commencement of the campaign, but at other places as the operations progressed. The system is stated to have worked well and with favourable results. The brigade aid-posts and dressing stations proved especially useful in battle. On the other hand the corps ambulance frequently failed to come up when required or to keep in touch with the dressing stations. It may be noted that in the earlier period of this campaign there was a scarcity of medical officers, but this was soon remedied and considerable supplementary aid was given by the voluntary aid-association formed in Vienna in 1859 during the Italian campaign and resuscitated in 1864 under the name of the Austrian National Aid Society (*Oesterreichischer patriotischer Hilfsverein*) and by the Schleswig Hospital Committee.

The Schleswig campaign was followed almost immediately by the war against Prussia and the war against Italy, which were carried on simultaneously in 1866. A force of about 200,000 or 7 army corps operated against Prussia. It had 7 medical companies, reserve companies and corps ambulances, and 21 field hospitals. Rest stations were organized along the line of evacuation from Theresienstadt to Vienna, and the whole of the military hospitals were expanded and additional hospitals established in the home territory for purposes of distribution of sick and wounded. Special sanitary precautions were taken, and in fact the general health of the troops was good up till the commencement of field operations. After the decisive battle of Königgrätz, on 3rd July, 1866, in which the Austrian Army had 5,800 killed and 17,800 wounded, exclusive of 7,800 reported missing, most of the severely wounded had to be left on the field. Austria had not then adhered to the Geneva Convention of 1864, and the state of the men, who were abandoned, became deplorable. Pyæmia, cholera and other infectious diseases attacked them, and eventually spread throughout the army and the country after peace was declared.

The excellent arrangements and organization for evacuation and distribution of wounded were almost entirely used for the

lightly wounded. In fact only one convoy of severely wounded came back. About 11,000 lightly wounded were evacuated between 29th June and 3rd July, in convoys of 200 to 300, sometimes 500 to 600, at a time. They were conveyed by road, lying down on straw in the military transport wagons, and by rail, in 3rd class railway cars. The railway authorities had already prepared 200 cars for transport of wounded, each with 8 cots suspended by slings for lying-down cases. The majority of the wounded, who came back to Vienna, were accommodated in the expanded garrison and civil hospitals, and in a field hospital which was opened in the Prater. In order to make room for fresh arrivals, the wounded were distributed from Vienna to places in Upper Austria and Salzburg, while in the city itself several barracks, monasteries, schools and other buildings were equipped as hospitals.

For the campaign in Italy the Austrians had 3 army corps, or about 58,000 men, with their full complement of bearer companies, five corps ambulances and nine field hospitals. This army was thus, comparatively, better equipped with medical units than the army in the North. Large rest stations were opened at Laibach, Marburg, Gross-Kanizsa and Agram, and smaller rest stations at Mürzzuschlag, Pettau and Stuhlweisenburg.

During the battle of Custoza much confusion arose from the fact that no information had been given regarding the places where aid-posts and dressing stations were to open, but the evacuation and distribution arrangements worked well. The majority of the severely wounded, unfit for transport, were left at Verona; the others were sent in specially prepared railway trains, carrying 100 wounded each, to a distributing station in Laibach, and from thence to the Tyrol, Salzburg and Upper Austria. Ten to twelve of these trains left Verona daily. Other trains were arranged to distribute wounded from Laibach to Graz, Marburg, Mürzzuschlag and Bruck, and also to Vienna.

These campaigns were followed by a comparatively long period of peace. Indeed, although the rising in Bosnia, Herzegovina and Dalmatia, in 1882, led to a prolonged guerilla warfare, during which the medical service learnt many lessons, especially in connexion with the organization and equipment required for campaigns in mountainous districts, the Austro-Hungarian Army has not since been engaged in any serious campaign against other organized armies.

In the history of its army medical service this recent period is marked mainly by changes in equipment and training consequent on advances in medical and surgical science, in the issue of many valuable volumes of practical instruction and historical interest, in the training of medical officers and subordinate medical personnel, and in systematizing in regulations and in improved organization the experiences of the campaigns of 1864 and 1866 and the subsequent wars of other countries in Europe and elsewhere. In 1868 an enquiry into the condition of the army medical service was instituted at the War Office with a view to the introduction of reforms, which included, amongst other matters, consideration of the question of the continuation of the *Josefs-Akademie* as a military institution. The first result of the enquiry was that the whole body of army medical officers was formed into an officer corps, under the title *Militärärztliches Offizierkorps*, by which it is now designated. Medical officers thus ceased to be classed as military officials (*Militärparteien*).

In the following year regulations were issued systematizing the organization of all the branches of the medical service. The peace establishment of officers was fixed at 852 and their pay was improved; courses of instruction in military surgery were instituted in garrison hospitals; the regimental medical personnel, *i.e.*, the stretcher bearers, were re-organized, and the establishment fixed at 1 serjeant-major per regiment, 1 non-commissioned officer per battalion and 3 stretcher bearers per company; the medical corps companies were united under one general administration and formed into 23 medical detachments, each detachment to consist of a section of trained men (*Stamm Abteilung*) and a section under instruction (*Instruktions Abteilung*); military hospitals were placed under the direction of army medical officers and the military commandant's duties were confined to exercising command over the personnel and patients in matters of military discipline; the number of garrison hospitals was fixed at 23 with a medical detachment in each, the other classes of military hospitals remaining as before; the field medical service was re-organized so as to be adapted to the new tactical unit, the division, instead of the brigade; infantry divisional medical units were organized with personnel and material for 2 aid-posts, 1 dressing station, 1 ambulance and 1 reserve of medical material; cavalry divisional units were also organized, but with only 1 aid-post and 1 dressing

station section; the medical units of the second line were organized as mobile field hospitals, field convalescent depots, and rest stations, while the reserve medical units were the depots of medical stores, stationary hospitals (*Kriegsheilanstalten*), private, garrison and regimental hospitals in the home territory. The medical service for mountain warfare was also organized into mountain divisional medical units, divisible into 4 sections with pack animal transport and material.

In connexion with these regulations several books of instruction and training were issued during the following years. In fact the military medical literature of this period, both official and non-official, is of an unusually extensive character.

In 1874 the *Josefs-Akademie* was abolished by Imperial decree, the buildings and museum, etc., being handed over to No. 1 Garrison Hospital for the purposes of the military medical courses to which reference has already been made. These courses were more definitely recognized, in regulations issued in 1875, as institutions for the technical instruction of young officers appointed to the Army Medical Officers' Corps and for post-graduate study on the part of senior officers.

In the same year steps were taken to organize voluntary aid in war, especially the aid that was to be given by the Teutonic and Maltese Orders of Knighthood. The arrangements made with the Orders then have not been materially altered since and are detailed in Chapter IV. Regulations were issued at the same time for the formation of 26 hospital trains on the State railways and 7 hospital ships on the Danube in case of war.

In 1879 three new garrison hospitals were established and in connexion with them 3 additional medical detachments were formed. This year also witnessed the occupation of Bosnia and Herzegovina, an event which led to several additions to the medical service in order to provide for the increase of duties thrown upon it in these territories. In 1879 too field medical regulations were issued in the form in which they now appear as Part IV of the regulations of the army medical service. They were followed in 1880 by the appendix regulating the work of voluntary aid societies in connection with army medical services, an appendix which also continues to be issued in the form then introduced, and which recognized the two orders of knighthood noted above, the Austrian Red

Cross Society, the Hungarian Red Cross Society, and their branches, as integral parts of the army medical organization in war, under the guidance, so far as preparation for war is concerned, of the higher administrative officers of the army medical service.

In 1882 the military medical courses in No. 1 Garrison Hospital were abandoned, and the system of giving medical students at the university a bursary or scholarship on their engaging to study medicine with a view to entering the army medical service was introduced in its place. The main points connected with this system are noted in Chapter II; it is the system which prevails at present for recruiting the army medical officers' corps.

Hitherto the regimental hospitals, or *Truppenspitäler* as they are called, were under regimental administration; in 1882 they were made independent units, but the personnel for subordinate services was drawn from regiments as before. Field hospitals were at this time organized into three identical sections of 200 beds each.

The guerilla warfare in 1882 in Bosnia and Herzegovina disclosed certain difficulties in the use and equipment of stretcher-bearers in mountainous districts and the great advantage of using the Tyrolese back chairs (*Gebirgskraxen*), instead of stretchers. In other respects the field medical organization appears to have acted well, especially the organization by which divisional medical units are divisible into independent sections with the material for employment in mountainous regions arranged for pack transport.

In 1892 the number of stretcher-bearers per company was increased from three to four, and in 1894 the medical officers were given complete command of all medical units in peace and in war, with disciplinary power on a wide basis. In 1890 the old buildings of the *Josefs-Akademie* were again opened as an army medical college (*Militärärztliche Applikationschule*) for officers joining the service.* Beyond these changes no important alterations in organization and no important events have taken place since 1882 in connexion with the Austro-Hungarian army medical service. The influence upon it of the various historical points noted in this chapter will readily be traced in its present organization for peace and war. The feature that appears to be most

* See Chapter II, p. 61.

prominent in its evolution, as compared with the history of the medical services of other armies, is the recognition, at a very early period, of the need of organized systems of evacuation and distribution of sick and wounded in war. This fact is sufficient to account for the advanced state of organization, in this respect, which is so noticeable in the military medical regulations and other military medical works published in Austria and Hungary, and is perhaps the chief point in connexion with the Austro-Hungarian medical service which merits special and detailed study.

CHAPTER II.

THE MEDICAL SERVICE IN TIME OF PEACE.

GENERAL MILITARY ORGANIZATION.

In Austria-Hungary all males between the ages of 19 and 42 are liable to military service. It is decided by lot whether such service is to be performed in the "common" army (*"Gemeinsames Heer"*),* *i.e.* the army common to both Austria and Hungary, or in the national army (Landwehr) of Austria, or in the national army (Honved) of Hungary.

The Landwehr and Honved are not the equivalents of the Landwehr of Germany. They are rather the standing armies of Austria and Hungary respectively, in contradistinction to the "common" army, which is the standing army of the dual monarchy as a whole.

This service in the "common" and national armies commences on the 1st January of the year in which a man is 21 years of age; and lasts for 12 years. When lots are drawn for the annual contingent† of recruits, a man may fall, according to the number he draws, to serve in the "common" or in the national army. If he goes to the former, he serves three years with the colours and seven in the reserve, while the remaining two years of the twelve years of service are passed in the reserve of his national army. If he draws a number for the national army, he serves two years only with the colours

* The expression "*k. u. k.*" (*kaiserliches und königliches*) is usually employed in connexion with this army.

† The number required for the annual contingent is about 135,000 (103,000 for the "common" army or navy, 19,970 for the Austrian and 12,500 for the Hungarian Landwehr).

and ten in the reserve. Men who do not draw numbers for the annual contingent form, as in Germany, a supplementary reserve (*Ersatz reserve*) and undergo only eight weeks' training. They remain in this reserve ten years, if they are supplementary reserve of the national army. This reserve also includes those who have already completed ten years in the supplementary reserve of the "common" army, and are in their eleventh and twelfth year of service in the supplementary reserve.

All others, namely youths between 19 and 21 years and men who have completed their 12 years with the colours or reserves, form up till their 42nd year the Landsturm of Austria and Hungary.

Military service may be passed in the sea forces instead of in the land forces, namely, 4 years at sea, 5 in the reserve and 3 in what is called the Seewehr, or second naval reserve.

Inhabitants of Bosnia-Herzegovina are also liable to military service, but only in the "common" army, three years with the colours and nine in the reserve. For them there is at present no Landwehr or Landsturm, and they have the privilege of supplying a substitute should they draw a number for the annual contingent.

The "common" army is administered by a "common" Ministry of War in Vienna, the *Reichskriegsministerium*, under the minister for war. The Austrian Landwehr is administered by a National Defence Ministry (*Ministerium für Landesverteidigung*) in Vienna, and the Hungarian Honved by a similar ministry in Budapest. The Austrian and Hungarian ministers for national defence are members of the Austrian and Hungarian parliaments respectively.

As in Germany, the better educated classes may serve as one year volunteers, in place of three (or two) years with the colours.

In the "common" army there are 106 infantry regiments (each consisting of a regimental staff, 4 battalions of 4 companies each, and a supplementary reserve battalion cadre), 4 Tyrolese rifle regiments of the same composition as the infantry regiments, and 27 independent rifle (*Jäger*) battalions of 4 companies and a supplementary reserve company cadre each. In the Austrian Landwehr there are 40 infantry regiments mostly of 3 battalions and a supplementary reserve battalion; in the Hungarian Honved there are 28 infantry regiments of 3 or 4 battalions each, with special reserve battalions and 10 reserve cadres for formation of new battalions

in time of war. The cavalry of the "common" army consists of 42 regiments composed of staff, two divisions of 3 squadrons each, pioneer troop, telegraph section and supplementary reserve cadre; the Landwehr cavalry consists of 6 Uhlan regiments, 3 squadrons of mounted Tyrolese rifles and one squadron of mounted Dalmatian rifles; the Honved cavalry has 10 hussar regiments.

The "common" army has artillery, engineers, and technical troops, including troops for medical services.* It is formed into fifteen army corps of two divisions, each division consisting of two or three brigades of two regiments each. The Landwehr is formed into eight divisions with sixteen brigades, the Honved into seven district commands (numbered I to VII), of 2 brigades each. In war the "common" army and the national armies combine to form field armies of a varying number of army corps of two or more divisions each, usually two "common" and one Landwehr (or Honved) division forming an army corps.

The officers of the Austro-Hungarian army are of 4 classes, combatant officers, military jurists, medical officers, and paymasters, each class forming an "officer corps." There are also a *Proviant Offizierskorps* and a corps of chaplains who take precedence next after the combatant officers. Other military services such as those connected with supply, construction, veterinary, pharmacist and some other services are officered by military officials (*Militär beamte*) who do not form an officer corps. The position of officers of the army medical corps (*Offiziere der Sanitäts truppen*) as distinct from the officers of the Army Medical Officers' Corps (*Militärärztliches Offizierskorps*) is somewhat peculiar. They belong to the combatant officers' corps and have the same military education as combatant officers in military cadet or other schools. They are commissioned direct into the medical corps, just as other cadets are commissioned direct into infantry, cavalry, train or other combatant branches; but they may subsequently exchange into combatant units and officers of combatant units may exchange into the medical corps. Their position in relationship to the medical officers is explained later on.

General officers of all classes, including surgeons-general, belong as a rule to the "common" army only, and hold

* The Landwehr has field artillery only, and the Honved is without these technical troops.

the higher commands both in the Landwehr and in the "common" army. Officers of the general staff belong to one General Staff Corps and hold all the staff appointments both in the national and "common" armies. All other officers serve in either the national or "common" armies, until they are promoted to general officers' rank.

GENERAL ORGANIZATION OF THE MEDICAL SERVICE.

The Austro-Hungarian Army Medical Service is composed of various elements and is autonomous. The elements, of which it may be said to be composed, are the following:—

- (a) The *Militärärztliches Offizierskorps*, or corps of medical officers.*
- (b) The officers and men of the Army Medical Corps (*Sanitätstruppe*).
- (c) The men employed for regimental medical service, the *Sanitätshilfspersonal bei den Truppen*, composed of men on the regimental establishment.
- (d) Military officials belonging to the *Militär-Medikamentenbranche*, a department dealing with the supply of medical and surgical material, and including pharmacist officials or apothecaries.
- (e) Nursing sisters.
- (f) Voluntary aid personnel.

The national armies have only medical officers and a regimental medical personnel. They do not possess a *Sanitätstruppe*, or special Army Medical Corps.

The Corps of Medical Officers (Militärärztliches Offizierskorps).

This Corps resembles the *Sanitäts-Offizierkorps* of the German Army, although it is recruited and distributed in a totally different manner. It is similar to the "Medical Staff" of the British Army previous to its amalgamation with the "Medical Staff Corps" into the Royal Army Medical Corps.

The officers have rank and titles, with fixed establishments, as follows. (The corresponding titles in the German Army are given also, as it is as well to note the difference in rank designated by the same German titles.)

* There are separate Medical Officers' Corps for the Landwehr and Honved called the *Landwehrärztliches Offizierskorps* of Austria, and the *Landwehrärztliches Offizierskorps* of Hungary.

Title.		Rank.	Number ("common" army).
Austria-Hungary.	Germany.		
Generalober- stabsarzt ...	Generalstabsarzt	Lt.-General ...	1
Generalstabsarzt	Generalarzt und Sanitäts-Inspek- teur ...	Major-General...	8
Oberstabsarzt I. Klasse ...	Generalarzt ...	Colonel... ..	50
Oberstabsarzt II. Klasse ...	Generaloberarzt	Lt.-Colonel ...	75
Stabsarzt ...	Oberstabsarzt ...	Major	154
Regimentsarzt ...	Stabsarzt	Captain	711
Oberarzt...	Oberarzt...	Lieutenant ...	229
Assistenzarzt ...	Assistenzarzt ...	2nd Lieutenant	...
Assistenzarzt- Stellvertreter	Unterarzt ...	Ensign	...

At present the strength of medical officers is about 200 below establishment in the ranks of *Ober* and *Regimentsarzt*.

In the Austrian and Hungarian Landwehr Medical Officers Corps, the numbers in the different ranks are as follows:—

	Austrian Landwehr.		*Hungarian Honved.	
Generalstabsarzt	...	1	...	1
Oberstabsarzt, 1st Kl. ...	...	6	...	8
„ 2nd Kl.	...	15	...	10
Stabsarzt	...	19	...	22
Regimentsarzt	...	152	...	122
Oberarzt	...	10	...	15
Total	...	203	...	178

First appointment and promotion.

In contrast with the Army Medical Services of Germany and France, medical officers in Austria-Hungary do not

*The ranks in Hungarian are Főtörsovos (Oberstabsarzt), Törsovos (Stabsarzt), Ezeratorvos (Regimentsarzt), Fő-orvos (Oberarzt), Segedorvos (Assistenzarzt).

receive their medical education in an Army Medical Cadet School, but are commissioned direct from civil life, after they have undergone a certain amount of military training. Medical students, however, who intend to enter the army, are under War Office control to a certain extent, in that they may receive certain grants in aid of the cost of their medical curriculum on condition that they serve as army medical officers for six years after they have qualified.

The system of obtaining medical officers in this manner is as follows :—

A medical student applies to the War Office to be accepted as an *Aspirant* for the *Militärärztliches-Offizierskorps*. His application must be accompanied by a certificate from a *Stabsarzt*, to whom he applies in person, stating his general, social and other qualifications. From the applications that come in, the director-general of the Army Medical Service selects those whom he requires to fill vacancies, basing his selection on the nature of the certificates or, if necessary, on personal interview or other form of enquiry. The number of *Aspiranten* selected is about 90 annually.

When a medical student is thus placed on the list of *Aspiranten*, he receives a money allowance or *stipendium* during his medical curriculum. In his first year the grant is £20 ; after he has passed his first professional examination, *i.e.* usually after 2½ years' study, it is raised to £30, and in the last session to £42. During the time he is studying as a medical student, he must serve in the ranks of an infantry regiment for six months from the 1st April to the 30th September. After he has qualified as a doctor, he becomes an *Assistenzarzt-Stellvertreter* and enters the Army Medical School in Vienna. In this rank he has the same position as the ensign (*Fähnrich*) of the combatant units, namely, between officer's and non-commissioned officer's rank. The course at the Army Medical School (the *Militärärztliche Applikationsschule*) is similar to that of the Val-de-Grâce in Paris, and lasts one year. At the end of the first half year the young officer is definitely approved for a commission in the *Militärärztliches-Offizierskorps* and obtains then his first commission as *Oberarzt*, remaining in the school in this rank till he has completed his year's study. At the end of the year there is an examination for the purpose of determining the order of seniority amongst the members of the class. Should an *Assistenzarzt-Stellvertreter* fail to be approved at the end of the first half year he

is removed from the school and passes into the reserve with rank of *Assistenzarzt*.*

Promotion from one rank to the other is only made to fill vacancies; but a *minimum* of two years' service in the rank of *Oberarzt* is required before promotion to that of *Regimentsarzt*. Promotion from the rank of *Regimentsarzt* to fill a vacancy in the establishment of *Stabsärzte* is made only after the officer has passed a written and oral examination in military surgery, hygiene, peace and field medical organization and establishments, recruiting and invaliding regulations, medical tactics, organization of an army in the field and the handling of medical units in the field, the medical services of foreign armies, and medical history of selected campaigns. The examination is conducted by a committee composed of the director-general, the president of the Army Medical Technical Committee, the principal medical officer of the 2nd Army Corps,† an officer of the general staff, and four medical officers of the Vienna garrison above the rank of captain, with a senior officer of the Landwehr Medical Service whenever a Landwehr medical officer comes up for examination. The examination takes place once every year in the month of November in Vienna, and *Regimentsärzte* are warned beforehand when their time comes to be examined for promotion either according to seniority or by selection. In the case of failure, an officer can appear again at the next examination in one, more than one, or all subjects, as the case may be.‡ If he fails a second time he will not be promoted. Promotion from *Stabsarzt* to *Oberstabsarzt II. Klasse* is by seniority or selection, from the latter rank to *Oberstabsarzt I. Kl.* by seniority only, and from this to *Generalstabsarzt* by seniority amongst those who have been reported upon after taking part in one of the general staff rides as fit to hold the position of principal medical officer of an army in the field or of the lines of communication.

* Medical practitioners, who have not become army medical officers, must serve as 1-year volunteers in the army, the first half of their service being as private soldiers in the ranks, the second half in a military hospital. On passing an examination at the end of their service, they become *Assistenzärzte* of the reserve.

† The Army Corps, whose headquarters are in Vienna.

‡ This examination has recently been replaced by a special course for senior officers at the *Militärärztliche Applikationsschule*.

There is no fixed period of age or service at which officers are retired; but no one can retire voluntarily until he is either 60 years of age or has 40 years' service, without forfeiting pension, unless he has been declared unfit for service by an invaliding committee.* An officer is, however, under no obligation to retire even after 60 years of age or 40 years of service, but, as an officer of 40 years' service gets a pension equal to the pay of his rank, there is little inducement to continue on the active list for a longer period.

On an average the rate of promotion at present is 2 years as *Oberarzt*, 15 as *Regimentsarzt*, 6 as *Stabsarzt*, 4 as *Oberstabsarzt II. Kl.*, 5 or 6 as *Oberstabsarzt I. Kl.*; so that the ages of the different ranks approximate those of the British Medical Service.

Pay and allowances of Medical officers.

All officers and officials of the Austro-Hungarian army are given pay and allowances according to rank and relative rank, irrespective of the branch of the service to which they belong. Thus a major-general, a chaplain with the same rank, a *Generalstabsarzt*, an intendants official of the same relative grade, and so on, all receive the same pay and allowances. The junior ranks receive increases of pay every third year of service in the rank; field officers and upwards have two different grades of pay according to whether they are amongst the junior or senior half of their particular rank or grade.

The yearly pay of medical officers and of all others of the medical service having the same relative rank or grade is approximately as follows:—

Rank.	1st Rate.	2nd Rate.	3rd Rate.	4th Rate.
Generaloberstabsarzt	£608	£657	...	...
Generalstabsarzt ...	£472	£542	...	...
Oberstabsarzt I Kl. ...	£300	£367	...	...
„ II Kl. ...	£225	£258	...	...
Stabsarzt ...	£183	£200	...	...
Regimentsarzt ...	£126	£134	£142	£150
Oberarzt ...	£92	£100	£109	£118
Assistenzarzt ...	£70	£75	£84	...

* The *Superarbitrierungs Kommission*.

An *Assistenzarzt-Stellvertreter* gets the same pay as a *Fähnrich*, with an allowance of about £2 2s. monthly and a clothing allowance.

The second rates of the *Generalstabsärzte* and *Generaloberstabsarzt* are given when they are amongst the senior half of the list of general officers of all branches of the service.

The allowances in addition to pay are for lodging, furniture, servants, travelling, camp and field equipment. The lodging allowance varies according to locality as well as rank, there being a special allowance for Vienna, and another for Budapest, while other garrisons are grouped in 10 different classes according to the rate allowed in lieu of quarters. The highest rate is in Vienna, where a *Generalstabsarzt*, for example gets annually about £127 for quarters. The lowest rate is in garrisons of Class 10, when an *Oberarzt* gets £9 a year for quarters. The furniture allowance varies according to rank only, an *Oberarzt* getting about £4 7s. and a *Generalstabsarzt* about £7 annually.

Pensions are given to officers, retired from the service on account of unfitness, after service of 10 years and upwards according to a sliding scale, based on the rate of pay and varying according to length of service. Thus after 10 years' service the pension is equal to about 40 per cent of the pay, and increases with each year of service to 50 per cent after 20 years' service and then in increasing proportion, as the number of years' service increases, up to 100 per cent. at 40 years' service. An officer with 40 or more years' service gets thus the full pay of his rank on retirement. In this case, or if the officer is 60 years old, the pension can be claimed, as already noted, on voluntary retirement.

THE ARMY MEDICAL CORPS

(*Sanitätstruppe*).

This is a corps of officers and men, who are distinct from the medical officers and wear a different uniform although they come under the command of the medical officers both for discipline and for technical duties.

The officers are commissioned, as already stated, directly into the corps from the military cadet academies or schools, or they may be transferred from combatant branches by exchange more especially when they are unfit for strictly

combatant duties although otherwise fit for military service. They have the same titles from *Fähnrich* upwards as the officers of infantry units, and their pay and allowances are the same as the corresponding ranks of the corps of medical officers.

Their duties are those of general training and command of the medical corps companies, or detachments (*Sanitätsabteilungen*) as they are called. Command, however, is subordinate to that of the medical officer in charge of the medical unit to which they are attached. A medical officer, in other words, commands the whole unit, including, in the case of a military hospital, all personnel, medical and otherwise, who are doing duty in it, and all officers and men who are patients in it, while under him, the officer of the medical corps detachment commands the detachment only.

The warrant officers, non-commissioned officers and men of the medical corps are formed into detachments, one for each garrison hospital, and do duty only in military hospitals in time of peace. There are consequently 27 *Sanitätsabteilungen* in the "common" army, corresponding with the 27 garrison hospitals and bearing the corresponding numbers. Thus No. 2 *Sanitätsabteilung* is the detachment of the *Sanitätstruppe* doing duty in No. 2 Garrison Hospital, and so on. The strength of each detachment varies according to the size and importance of the garrison hospital to which it belongs. Thus the largest detachment consists of 5 officers and 270 men, and the smallest of 3 officers and 58 men. The total strength of the corps in peace is 85 officers and 3,062 men.

The various ranks of men of the *Sanitätstruppe* are:—

<i>Feldwebel</i>	= sergeant-major or warrant officer.
<i>Zugsführer</i>	= sergeant.
<i>Korporal</i>	= corporal.
<i>Gefreiter</i>	= lance-corporal.
<i>Sanitätssoldat</i>	= private.

Their duties are those of the subordinate personnel of a military hospital, including ward-masters, and nursing duties, cooking and general duty. The men are recruited direct into the corps on the levying of each annual contingent. For the first half-year of their service they are trained only in military drills, discipline and general duties by the officers of the corps; during their second half-year they are trained in the hospital wards by the medical officers. They are

afterwards assigned to definite duties as ward-masters, nurses, cooks, general duty orderlies, and so on for the remainder of their service with the colours. Many of them are one-year volunteers of the medical student and pharmacist student class, who perform their service with the colours in this manner.

None of the officers and men of the *Sanitätstruppe* do duty with regimental units, and they are thus totally different from the *Sanitätsmannschaft* of the German Army, who are recruited from men already trained in regimental combatant units and who are distributed mainly for medical duties within these units. The Austro-Hungarian medical corps detachments correspond more with the French *Sections d'infirmiers*, or with the companies of the Royal Army Medical Corps. The subordinate personnel may extend their service with the colours year by year, receiving a gratuity each year, up to 12 years. They are then qualified to hold a government appointment in civil life.

The technical instruction is carried out in accordance with an official training manual, called "*Leitfaden zum fachtechnischen Unterrichte des k. u. k. Sanitäts-Hilfspersonals*." It is similar in character to the "Royal Army Medical Corps Training," but goes into greater detail in improvisation training and in transport of wounded. The drill and general military training is carried out in accordance with Part VI of the "*Instruktion für die Truppendschulen*."

The general plan of training and instruction is drawn up each year by the medical officer commanding a garrison hospital in consultation with the officer commanding the medical corps detachment belonging to the hospital.

The men of each detachment are divided into two sections, namely, the section under instruction (*Instruktions Abteilung*), and the section of trained men for hospital duties (*Stamm Abteilung*). The "*Instruktion*" section has its whole time devoted to instruction, which is carried out partly by the officers of the Army Medical Corps detachment and partly by the medical officers of the Garrison Hospital to which the detachment belongs. For this purpose classes of instruction of various kinds are formed in each Garrison Hospital, namely—

- (1) For general instruction of the men of the detachment.
- (2) For instruction of men likely to become non-commissioned officers.

- (3) For instruction of both non-commissioned officers and men in special subjects.
- (4) For instruction of one-year volunteers, who are studying for the examination to qualify as officer of the reserve of the Army Medical Corps.
- (5) For instruction of officers and cadets of the Army Medical Corps.

The men commence their classes of instruction after they have completed six weeks recruits' training. The recruit training is carried out by the officers of the detachment, and commences on enlistment in October. It consists of the ordinary recruits' training of infantry, with the omission of training in musketry and combatant duties. The men are then separated into two classes—(1) those who are to join the general class of instruction, and (2) those who are selected for the class of instruction of men likely to become non-commissioned officers. The latter are selected by the officer commanding the detachment, in whatever numbers he thinks fit, from amongst the more intelligent and suitable recruits.

The general class lasts till the 15th March, and that for non-commissioned officers for at least four months, but without any fixed time for the completion of the course.

The men of both the general and the non-commissioned officers' classes are instructed in the service regulations, army organization, medical duties in and out of hospital, and in technical medical and surgical knowledge such as is prescribed in the manual mentioned above. The men in the non-commissioned officers' class are instructed in addition in drill regulations, bugle sounds, more detailed knowledge of service regulations and army organization, transport and supply so far as they affect the duties of non-commissioned officers of the Army Medical Corps, reading, writing and accounts, administration and clerical duties.

Once a month both classes of instruction have the more important of the articles of war read to them, and every morning the men carry out physical training exercises for 10 to 15 minutes under a non-commissioned officer.

The classes of special instruction are in pioneer duties, such as repairing roads and bridges, digging trenches, and laying out camps, in convoy (wagon) duties, and in practical exercises and field manœuvres.

The one-year volunteers undergo instruction in recruits' drill from 1st October to 30th November, in more detailed

military and technical instruction in Army Medical Corps subjects from 1st December to 30th April, and in practical instruction in the duties of the corps from 1st May to the end of their year's service with the colours. The examination for commission as officer of the reserve at the termination of the year is both written and oral, the former in such subjects as interior economy, administration, and methods of conducting business in the army; and the latter in special technical duties, army organization, map reading and knowledge of country, pioneer duties and transport organization. One-year volunteers who fail to pass the examination must serve a second year with the colours.

The instruction of officers and cadets of the Army Medical Corps depends very much upon the officer commanding the detachment to which they belong, but instruction in sword exercises and in the use of the revolver is compulsory for them, and they must take part in the war games for medical officers. They are also given opportunities of going through courses of instruction in transport and supply, including horsemastership and equitation. Reserve officers are to be specially instructed in these matters and in alterations in regulations, when they are called out for training.

THE REGIMENTAL MEDICAL SERVICE.

(Sanitätshilfspersonal bei den Truppen.)

The regimental medical service, apart from the officers of the *Militärärztliches Offizierskorps*, who are attached to regimental units but wear the uniform of their own corps, consists of non-commissioned officers and men, who belong to and wear the uniform of the regiment. They are trained within the regiment for six months by the regimental medical officers, and in military hospitals for three months by the hospital medical officers. They are of three classes—

- (1) Medical assistants. (*Sanitätsunteroffiziere*, formerly *Gehilfe*.)
- (2) Stretcher bearers. (*Blessiertenträger*.)
- (3) Carriers of medical and surgical equipment. (*Bandagenträger*.)

The first class are non-commissioned officers, and number, in time of peace, one per battalion, in time of war one per company, or corresponding unit. They perform all the

wardmaster's duties in the regimental hospitals, as well as in the garrison hospitals of the Landwehr, which has no army medical corps.

The stretcher bearers are trained in time of peace as such, and perform in regimental and smaller military hospitals all the medical duties which, in the garrison hospitals, are performed by the medical corps detachments. Four are assigned to each company or similar unit.

The carriers of equipment, of which there are two to each battalion or similar unit, are men who carry the medical and surgical equipment of the unit, and have charge generally of the regimental medical equipment. Details of this equipment are given in Chapter III. The *Bandagenträger*, it will be noted, are used for carrying equipment in order to avoid having wheeled vehicles or pack animals for this purpose with the combatant units.

PHARMACIST OFFICIALS.

(*Medikamentenbeamte.*)

The pharmacists form a special pharmaceutical branch, or *Medikamentenbranche*, as it is called, of the "common" army and also of the Honved. They have charge of all the medical and surgical stores in time of peace, and are assisted by a small technical personnel, as well as by men of the medical corps.

The titles, relative rank, and numbers in each grade are as follows:—

Medikamentendirektor (Lt.-Colonel)	-	-	1
„ oberverwalter (Major)	-	-	2
„ verwalter (Captain)	-	-	10
„ offiziäl (Lieutenant)	-	-	50
„ akzessist (2nd Lieutenant)	-	-	17
Total	-	-	104

The grade "*Offiziäl*" has three classes, and there is a grade corresponding to that of *Assistenzarzt*, called *Medikamentenpratikant*. The members of this grade are in the reserve.

The establishment of pharmacist officials in time of peace is 108. The technical assistants number 37 in peace. They are not graded in any class, but are skilled mechanics, such as surgical instrument makers and repairers.

NURSING SISTERS.

There is no regular corps of nursing sisters; but in the larger garrison hospitals in Vienna and Budapest, nuns of the order of St. Vincent de Paul are employed, while in officers' wards lay nursing sisters may be employed as required.

VOLUNTARY AID.

This forms a special branch of the medical resources of the Austro-Hungarian Medical Services; its main features are described in Chapter IV.

THE RESERVES OF THE MEDICAL SERVICE.

As in the German army, there is a vast reserve liable to mobilization in time of war amongst medical men, who have served as one-year volunteers, and who, on passing their examination, have been given the rank of *Assistenzarzt* in the reserve. There is also a vast reserve of subordinate personnel in the reserves of the *Sanitätstruppe*, and amongst men who have served with regimental units as medical assistants, stretcher bearers and dressing orderlies. The voluntary aid organization also provides considerable resources, upon which the army is able to draw in time of war. The number of medical men on the list of the reserve of the medical officers' corps of the "common" army is 874, of the Austrian Landwehr 655, and of the Hungarian Honved 356.

ADMINISTRATION AND DISTRIBUTION OF PERSONNEL.

The "common" army, as already noted, is administered in the *Reichskriegsministerium* in Vienna; the medical branch being known as the 14th *Abteilung*.* The branch deals with all the routine and current questions of administration connected with personnel, sanitation, medical and surgical equipment, organization and mobilization, checking of medical certificates of all kinds, estimates for the budget,

* There are 15 *Abteilungen* grouped in 4 divisions or sections, each under a section chief, who signs documents in the name of the Minister for War, and is of high military rank. The 14th *Abteilung* belongs to the 3rd Section.

and so on. The staff of this branch consists of a chief and 9 medical officers, 1 intendance official and 1 pharmacist official; the work being distributed as follows:—

Director or head of the branch...	Generalstabsarzt.
Personnel (medical officers only)...	1 Oberstabsarzt II. Kl.
Sanitation	1 Oberstabsarzt II. Kl.
Material	1 Oberstabsarzt II. Kl. 1 Pharmacist official.
Organization and mobilization ...	2 Stabsärzte.
Personnel other than medical officers on active list ...	1 Stabsarzt.
Medical certificates ...	1 Stabsarzt.
Estimates	1 Intendance official.
Indexing and records ...	2 Regimentsärzte.

All the strictly clerical work, such as receipt, despatch, registration, copying, &c., of documents, is carried out in a central office or *Kanzleidirektion*, so that there are no clerks, military or civil, assigned to the officers.

This branch of the War Office, however, does not represent the whole of the higher administration and technical control of the medical service; and the director of it is not necessarily the director-general of the Army Medical Service.* He deals directly, however, with the Minister for War, and is directly responsible to him.

In addition to the 15 administrative branches there are auxiliary branches, which deal with the general inspection and training of the forces, and include the general staff, inspectorates of the various arms, and some technical committees. These auxiliary branches (*Hilfsorgane*, as they are called) are 16 in number, and of these Nos. 10, 12 and 14 are entirely and No. 16 partially connected with army medical affairs.

No. 10 auxiliary branch is that of the commandant of the *Sanitätstruppe*, whose duty it is to inspect and arrange for the training, etc., of the officers and men of the Army Medical Corps. He has the rank of colonel, and submits his reports direct to the War Office. He has a captain of the corps as adjutant.

* He is at present junior to all the *Generalstabsärzte*, although his predecessor, *Generaloberstabsarzt* Ritter v. Uriel, who retired on the 1st March, 1909, happened to be the most senior medical officer in the Army, and was, as such, also director-general.

No 12 auxiliary branch is that of the head of the *Militär-ärztliches Offizierskorps*, and is the senior officer of the corps for the time being. He has a *Stabsarzt* as adjutant. He has the same duties relative to the medical officers, as the commandant of the *Sanitätstruppe* has towards the officers and men of that corps.*

No. 14 auxiliary branch is the Technical Army Medical Committee, which corresponds with the Technical Committee of the French Army Medical Service ; all technical questions and investigations of a scientific character are referred to it. This committee, which exercises an important influence on the general education of the medical service and on scientific progress in connexion with the professional aspects of the military medical service, consists of a president, 5 permanent, 8 ordinary and 14 extraordinary members, and 1 paymaster for pay and accounts. The president is a senior officer specially appointed to the post, but not necessarily the chief either of No. 14 section of the War Office nor of No. 12 auxiliary branch.†

The permanent members are officers, whose other duties are connected with instruction in the Army Medical School ; they are the professors of military surgery, of military hygiene and chemistry, and of organization, and the officers in charge of the bacteriological and chemical laboratories.

The ordinary members are medical officers holding the more important posts in Vienna, such as the principal medical officer of the 2nd Army Corps, the officers commanding Nos. 1 and 2 Garrison Hospitals, and the officers in charge of the medical and surgical divisions of these hospitals.

The extraordinary members are officers who were formerly either permanent or ordinary members and are occupying posts outside Vienna, or officers who have made a special study of certain subjects and to whom such subjects may be referred for report.

* When *Generaloberstabsarzt* Ritter v. Uriel was in charge of No. 14 *Abteilung* of the War Office, he was also, in virtue of his seniority, head of No. 12 auxiliary branch. At present the head of the latter branch is *Generaloberstabsarzt* Kratschmer Ritter v. Forstburg, who does not belong to the 14th *Abteilung* of the War Office, but has to submit reports to it.

† Ritter v. Uriel did not hold this post, although the present Director-General, Ritter Kratschmer v. Forstburg, does. The latter has held the post for several years, having been appointed on account of his eminent scientific work in hygiene.

The seat of this Technical Committee is in the Army Medical School buildings in Vienna.

No. 16 auxiliary branch is called the Technical Military Committee, and is divided into 4 divisions, each under the charge of a staff officer. The divisions contain sub-divisions dealing with a variety of technical questions connected with equipment, armaments, and so on, but one of these sub-divisions is for military and local statistics of all kinds. Under this sub-division come the preparation and publication of the statistics of the health of the army, and a medical officer* has charge of this work. He shares with other officers of the statistical sub-division about 7 clerks.

The administration of the medical services of the Landwehr and Honved is under the direction of a *Generalstabsarzt* in the Ministry of National Defence in Vienna, and an officer of the same rank in the Ministry of National Defence in Budapest. These administrations are quite separate from one another and from the *Reichskriegsministerium* in all financial, personal and economical matters, but must provide equipment and training uniform with that of the "common" army. The *Generalstabsarzt* of the Austrian Landwehr is chief of the 6th *Abteilung* of the Austrian National Defence Ministry and head of the *Landwehrärztliches Offizierskorps*. He is assisted by 2 field medical officers and 2 *Regimentsärzte* of the Landwehr. Being of general's rank he belongs, as already noted, to the "common" army, but may have been promoted to the rank from the Landwehr. The *Generalstabsarzt* in the Hungarian Ministry of National Defence is chief of No. 5 *Abteilung* and is an officer promoted from the Hungarian Honved. He is assisted by a field medical officer and 2 *Regimentsärzte*.

Each army corps in Austria-Hungary has an administrative medical officer, who in peace is called *Sanitätschef*.† His rank is either *Generalstabsarzt* or *Oberstabsarzt I. Kl.* He has permanently on his staff one *Stabsarzt*, and one or more *Regimentsärzte* are attached from regiments. He has one or more clerks, but clerical work is carried out, as in the War Office, by a central clerical establishment.

* At present *Oberstabsarzt* II. Kl. Cron.

† In war the principal medical officer of an army corps is called *Korps-Chefarzt*, or, more recently, *Sanitätschef*.

In each division a *Stabsarzt*, usually the commandant of the garrison hospital or the officer in charge of one of the divisions of the hospital, is appointed to carry on the administrative medical duties within the division. He is called the *Divisions-Chefarzt*. Similarly in large garrisons, which are not the seat of a divisional or higher command, an *Oberstabsarzt* or *Stabsarzt* is appointed to act as senior medical officer, and is called the *Garnisons-Chefarzt*. In addition, the fortresses of Cracow and Przemysl have, in peace, an *Oberstabsarzt I. Kl.* as principal medical officer with the title of *Festungs-Chefarzt*.

Each Landwehr and Honved territorial command has an *Oberstabsarzt II. Kl.* and *I. Kl.* respectively as *Sanitätschef*.

The remaining medical officers are distributed amongst the various garrison hospitals, the army medical school and other establishments, or they are attached to regiments for regimental medical duties.

As a rule the subaltern medical officers on leaving the army medical school serve for one or two years in a garrison hospital and are then transferred to regiments, where they serve, except when required for special posts, until they reach the rank of *Stabsarzt*. They then return to duty in the garrison hospitals, where they have charge of divisions, etc., or they are employed in special administrative or other extra regimental duties. The number of medical officers with regimental units in peace is 1 per battalion of infantry, 1 per regiment of divisional artillery, 3 per regiment of cavalry, and 2 per regiment of corps artillery. Landwehr regiments have a similar medical establishment.

The *Oberstabsärzte II. Kl.* are, as a rule, the commandants of the garrison hospitals, but in the larger hospitals the post is held by an *Oberstabsarzt I. Kl.*

The men of the *Sanitätstruppe*, as already noted, are only employed in garrison hospitals, but a few are employed in connexion with the army medical school, medical and surgical stores and other establishments, while about 100 are kept for special nursing duties in regimental hospitals or Landwehr garrison hospitals when there are serious cases to be nursed there.

The distribution of the subordinate medical personnel with regiments has already been noted.

The pharmacist officials have charge of the medical and surgical stores under a director of the branch, who is subordinate to the head of the Army Medical Officers' Corps

(No. 12 auxiliary branch of the War Office) as regards pharmacist personnel, but to No. 14 *Abteilung* as regards material.

There is no special distribution of medical officers or others for sanitary services, nor are there specialist sanitary officers, as in the British and German armies. All sanitary services have to be carried out regimentally and under the supervision of the regimental medical service, while hygienic investigations may be made with the regimental equipment or in laboratories in garrison hospitals. All the more important investigations, however, are carried out by the Technical Army Medical Committee in Vienna.

MILITARY HOSPITALS AND OTHER ESTABLISHMENTS.

Military hospitals and other establishments for the sick are classified as follows:—

- (1) Regimental sick rooms (*Marodenzimmer**).
- (2) Hospitals for slight cases (*Marodenhäuser*).
- (3) Regimental hospitals (*Truppenspitäler*).
Landwehr hospitals (*Landwehrspitäler*).
Landwehr regimental hospitals (*Landwehrtruppenspitäler*).
- (4) Garrison hospitals (*Garnisonsspitäler*).
- (5) Military establishments at health resorts (*Militärheilanstalten in Kurorten*).

Regimental sick rooms.

The regimental sick rooms of the Austro-Hungarian army are similar to those of the French and German armies both in organization and in function. They are inspection rooms, where the men reporting sick are seen, where patients may be temporarily retained until they are removed to hospital, and where trivial cases may be kept and treated until they are able to return to duty.

* The terms *marode* and *krank*, although both mean "sick," are used in different senses in Austria in order to differentiate between trivial cases of sickness and those requiring hospital treatment, the first of the two terms being always applied to designate the trivial cases.

Hospitals for slight cases of sickness.

The size and importance of garrison hospitals in Austria-Hungary vary according to the size and importance of the garrisons. Consequently small garrisons of a strength of 300 to 500 do not have a fully equipped hospital, but instead a hospital for slight cases, a *Marodenhaus*, as it is called, may be opened for the reception and treatment of the slighter cases of sickness in the garrison, serious cases being treated in it only when they cannot be transferred to the nearest large hospital. Similar hospitals may be established during manœuvres or on other occasions when troops are concentrated and also during epidemics or whenever a temporary hospital is required.

The hospital is equipped and the personnel supplied by one of the regiments; it is placed under the charge of the senior medical officer of the regiment, assisted by a non-commissioned officer for interior economy and by regimental stretcher bearers for nursing and ward masters' duties. In special cases, as for example, when serious cases have to be treated in it, men of the army medical corps may be attached to a *Marodenhaus*. In 1908 *Marodenhäuser* were open in 68 garrisons of the "common" army, and in 53 garrisons (2 *Marodenhäuser* in 4 of them) of the Landwehr. The Honved garrisons had no *Marodenhäuser*.

Regimental Hospitals.

The name *Truppenspital* is given to this class of hospital, to distinguish it from *Garnisonsspital*, merely because its personnel is provided by the regimental medical service and not by the army medical corps. In other respects the regimental hospital is a garrison hospital, that is to say, in every garrison having a strength of over 500 where there is no hospital of the class called *Garnisonsspital*, there is a *Truppenspital*. The regimental hospitals are equipped in the same way as the garrison hospitals and form independent medical establishments; the one distinction being that the personnel, as just noted, is provided by the regiments, whose sick are treated in them, and not by the *Sanitätstruppe*.

The command of a regimental hospital is exercised by the administrative medical officer of the garrison, *Garnisons-Chefarzt*, or if the station is the headquarters of a division, by

the administrative medical officer of the division (*Divisions-Chefarzt*). When there is neither a garrison nor divisional administrative medical officer, the senior medical officer in the station commands the regimental hospital. An officer from one of the regiments is attached to the hospital for quartermaster's duties, as acting quartermaster (*Verwaltungs-Offizier*), and the general and nursing duties are carried out by men who have undergone the course of training as stretcher bearers and dressings orderlies; although, as in the case of *Marodenhäuser*, men of the Army Medical Corps may be sent to the hospital when special nursing is required.

The hospitals of garrisons occupied by Landwehr or Honved troops are similar in organization to the regimental hospitals, the former being called *Landwehrspitäler* and the latter *Landwehrtruppenspitäler*.

In 1908 there were 91 of these hospitals for the "common" Army, 13 for the Landwehr, and 7 for the Honved.

The hospitals connected with military asylums, establishments for veterans, and other military establishments are classified as regimental hospitals. Thus the Cadet Academy for the Landwehr in Vienna has such a hospital, called the *Zöglingsspital*. Other hospitals of this nature are the hospitals of the institutions for veterans (*Militär-Invalidenhäuser*) in Vienna, Prague, and Tyrnau, and for the military prison in Möllersdorf. The regimental hospital at Tyrnau has a section for mental diseases.

Garrison Hospitals.

These hospitals have been established gradually in the larger garrisons, replacing regimental hospitals there. The number at present is 27 for the "common" army. They are numbered consecutively from No. 1 to No. 27. Vienna and Budapest have two garrison hospitals, Nos. 1 and 2 in Vienna and Nos. 16 and 17 in Budapest.* The Landwehr possesses no garrison hospital, but there is one for the Honved in Budapest.

* The other garrisons with garrison hospitals are Cracow, Olmütz, Brünn, Baden, Graz, Laibach, Trieste, Komárom, Pozsony, Kassa, Temesvár, Prague, Josephstadt, Theresienstadt, Przemyśl, Lemberg, Nagyszeben, Agram, Linz, Innsbruck, Sarajevo, Mostar, Ragusa.

The garrison hospitals are intended not only for the treatment of sick, but also for the instruction and training of the one-year volunteer medical students and the men of the Army Medical Corps. Each garrison hospital is commanded by a senior medical officer of the rank of *Oberstabsarzt*. He has under him, in addition to his medical staff, a chaplain and a paymaster, and a detachment of the Army Medical Corps. Quartermaster's duties may be performed by an officer, who may be a retired officer, and who is called the "*Okonomie-Offizier*"; or, as is generally the case, by an administration committee, consisting of one of the medical officers, an officer of the medical corps, and the paymaster. Amongst other functions of the garrison hospital are the maintenance of a medical and surgical store (*Apotheke*) and the medical and surgical equipment of one or more field medical units, and the formation of the detachments of medical personnel for field medical units. The garrison hospitals are, in other words, mobilization centres for the field medical service. Garrison hospitals as military units belong to brigade or divisional commands; and the army corps commander exercises control over them through these channels. The principal medical officer of the corps has, however, direct supervision over the technical work of the garrison hospitals in his command, while the chief intendant of the corps supervises the administrative services in them. All the nursing, cooking and general duty work of garrison hospitals is carried out by the men of the detachment of the army medical corps, the strength of the detachment being determined by the size of the hospital. A detachment, as already noted, is divided into two sections, the section undergoing instruction (*Instruktions-Abteilung*) and the section that has completed the course and is employed in regular hospital duties (*Stamm-Abteilung*). Non-commissioned officers and men of the latter group act as ward-masters and nurses. Many of them are men of long service.

In the largest of the garrison hospitals, No. 1 Garrison Hospital at Vienna, wards are assigned to six divisions, namely, medical, surgical, eye, ear nose and throat, skin and venereal, and mental diseases; and a similar grouping of wards may be made in other hospitals. A senior medical officer has charge of each division and is called *Chefarzt*. He has one or more junior officers as assistants. Nursing sisters are only employed in the larger hospitals. Thus

No. 1 Garrison Hospital in Vienna has 18 nursing sisters of the Order of St. Vincent de Paul. They are quartered in a building adjoining the hospital, belonging to the Army Medical School.

Each division has an out-patient department (*Ambulatorium*) as well as wards. There are also auxiliary departments, such as pathological and clinical laboratories, bath establishments, and instruction rooms for the men of the Army Medical Corps. The bath establishments are used not only by hospital patients but also by officers and men of the garrison. They are of the nature of Turkish or Russian baths, and trained men of the Army Medical Corps do duty in them as bath attendants and masseurs.

Each garrison hospital has a large dispensary for supply of medicines to the hospital and also to out-patients, who, if they are officers or members of officers' families, obtain medicines on payment, but at considerably lower prices than in druggists' shops. These dispensaries are under the charge of officials of the *Medikamentenbranche* and are replenished from a central depôt of medical stores (*Medikamenten depôt*). The dispensary officials have also charge of the field medical and surgical equipment stores in each garrison hospital, and maintain a turnover of the various articles and drugs.

Hospital cooking and kitchen arrangements generally are in the hands of civilians, male and female, who are employed by a caterer.

The dietary consists of four ordinary "diet forms" and of extras. No. I diet consists of milk for breakfast, and beef-tea for mid-day and evening meal. No. II, III, IV diets are fuller diets, with a selection from three kinds of soup for breakfast and supper, and soup with a meat dish and vegetables for dinner. Altogether 55 different kinds of soups, meat, vegetable or other dishes are scheduled. The extras consist of 37 different foods or drinks from which additions can be made to any of the four diet types.

No hospital clothing or other personal equipment is provided. The patients wear uniform when allowed up; and their own underclothing when in bed.

Military Establishments in Health Resorts.

There are 12 of these establishments in Austria-Hungary for the "common" army, namely, 2 at Baden, near Vienna,

and 1 at Carlsbad, Teplitz-Schönau, Herculesfürdo, Hofgastein, Pöstyén, Trencsén-Tépliez, Budapest, Topusko, Lipik and Töplitz. The establishments at Baden are affiliated to No. 27 garrison hospital, those in Carlsbad and Schönau to No. 11 garrison hospital in Prague and No. 13 garrison hospital in Theresienstadt respectively. There is also an establishment at Esiz for the Landwehr.

Most of the establishments are open only during the season. The personnel is obtained partly from regimental medical personnel, partly from the Army Medical Corps. In Baden and Herculesbad, there are permanent commandants, a *Stabsarzt* in the former and a retired captain in the latter. The commandants of the other establishments are appointed each season from amongst combatant officers.

MEDICAL AND SURGICAL STORES.

Medical and surgical stores are partly purchased by contract with private firms and partly manufactured in a central medical and surgical stores depot. This depot is known as the *Medikamentendepôt*. It is in Vienna. It has a laboratory attached to it and is under the *Militär-Medikamentendirektion*, the directorate for the supply of medical and surgical material. All the supplies purchased are here examined and tested, and supervision is maintained by the directorate over all the other medical stores and dispensaries in Austria-Hungary. There is a committee associated with it, which meets, as required from time to time, to determine what new drugs or apparatus etc. should be introduced into the army, and to consider other questions affecting the supply of medical and surgical material. The president of the committee is the president of the army medical technical committee, and the other members are specially selected medical officers, an intendance officer, and the senior pharmacist official (*Medikamentendirektor*).

In this central depot all the tabloid preparations and dressing material for the army are manufactured.

Local medical and surgical stores or dispensaries are formed in connection with each garrison hospital, and are numbered with the number of the garrison hospital to which they belong. There are thus 28 such dispensaries for the 27 garrison hospitals of the "common" army and for the Honved garrison hospital in Budapest.

In addition, however, to these garrison hospital dispensaries there are 13 special garrison dispensaries in garrisons, which have no garrison hospitals, namely, in Arad, Cattaro, Czernowitz, Esseg, Karlsburg, Jaroslau, Klagenfurt, Klausenburg, Tyrnau, Grosswardein, Peterwardein, Stanislau and Zara. These garrison dispensaries are not designated by numbers, but by the name of the place where they are established.

The personnel of the dispensaries is obtained from the pharmacist branch, *i.e.*, pharmacist officials and skilled labour, but men of the army medical corps may be appointed to them for general duty. The dispensaries and their personnel are under the commandant of the garrison hospital or, in the case of the special garrison dispensaries, under the senior medical officer of the garrison.

As already noted, the medical and surgical mobilization stores section of each garrison hospital is affiliated to the dispensary of the hospital.

ARMY MEDICAL EDUCATIONAL ESTABLISHMENTS.

Medical Officers of the "common" army and Austrian Landwehr receive special instruction in an Army Medical College, the *Militärärztliche Applikationsschule* in Vienna; those of the Hungarian Honved in a similar but smaller college in Budapest.

The Army Medical College in Vienna is in the old buildings known as the Josephinum, in the Währinger Strasse. It adjoins No. 1 garrison hospital, which is the hospital for clinical instruction in connexion with it. This college has been in existence in its present form only since 1900; there being no college of the kind until that year, since the abolition of the Army Medical Cadet School in the Josephinum in 1874. The course of instruction lasts for one year, from October to December, and the students are the young medical officers on probation. A short senior course has recently been introduced. For two months—August and September—the students do duty in the garrison hospital. A senior medical officer, usually a *Generalstabsarzt*, is appointed commandant, and he is assisted by one or more (at present three) *Regimentsärzte*, who are called adjutants.

The professors and lecturers are officers who hold other appointments, either in No. 1 garrison hospital as chiefs of divisions, or as members of the army medical technical committee, or in the War Office. Altogether 11 medical officers act as lecturers or professors, the subjects being military surgery, military hygiene and chemistry, mental diseases, army medical organization, operative surgery, clinical medicine, ophthalmology, laryngology, dermatology and venereal diseases, bacteriology, pathology and medical jurisprudence. An officer of the general staff, employed in the military history section of the War Office, lectures on general military organization, tactics, map-reading and reconnaissance, military medical manœuvres and field exercises as affecting medical services; and an intendant official lectures on administration and interior economy. In addition there is a medical officer of the Landwehr as instructor of Landwehr army medical officers, a major of cavalry instructs in riding, and a civilian in fencing.

The army medical college is directly under the War Office, and the senior officer of the medical officers' corps is its inspecting officer.

The instruction of medical officers in field duties is very thorough. For two months in winter—January and February—medical war games are carried out, usually once a week, while medical staff tours are held in April and May. A very considerable literature has sprung up in recent years on these subjects, the details of collecting and evacuating large masses of sick and wounded and reconnaissance of local resources for their temporary accommodation being minutely considered. As already noted, fitness for promotion to the highest ranks in the medical service is determined by the work done on a general staff tour.

ARMY MEDICAL JOURNALS, SOCIETIES, &C.

There is no special army medical journal connected with the Army Medical Service in Austria-Hungary, but two of the weekly medical journals and one military journal issue supplements with military medical titles.

The most regular of them is "*Der Militärarzt*," which appears twice a month as a supplement of the "*Wiener Medizinische Wochenschrift*." The "*Medizinische Klinik*,"

formerly the "*Medizinische Presse*," issues a supplement called the "*Allgemeine Militärärztliche Zeitung*," but its issue is more irregular than that of "*Der Militärarzt*," only six numbers appearing in 1908. The military journal "*Militär-ische Presse*" commenced issuing a medical supplement, "*Militärärztliches Blatt*," in October, 1908, but this, too, is a somewhat irregular issue.

In addition to these military medical supplements, many important articles on military medical subjects appear in the well-known magazine, Streffleur's *Oesterreichische Militär-Zeitschrift*, and a large number of monographs on army medical subjects, such as medical histories of campaigns, medical organization of foreign armies, transport of sick and wounded, medical organization and field operations, war game and staff ride problems, and similar subjects, has been published by medical officers of the Austro-Hungarian army and by instructors at the Army Medical School in Vienna. The works of Myrdacz, Cron, Kirchenberger, Steiner, v. Hoen, and some of the younger medical officers who have written in collaboration with them are the most important of the modern publications, and were used as text books for the examinations for promotion to the rank of *Stabsarzt*. Important books were also published by an earlier body of officers, notably by Ritter v. Kraus, Baron v. Mundy, Port, Habart, and Ritter v. Töply. Some of these early works were published officially as communications of the Army Medical Committee (*Mittheilungen des Militär-Sanitäts-Comité*), but latterly no official publications have been made in this manner, and the literature which has just been referred to and is published by J. Šafář^v Vienna, has practically taken its place. The only official publication apart from the various manuals and regulations is the annual statistical report of the health of the army, the *Sanitätsstatistisches Jahrbuch*.

Military medical societies for reading and discussing scientific papers and technical subjects connected with the army medical service are formed in each garrison, and meet usually once a month. The transactions appear in "*Der Militärarzt*."

CHAPTER III.

THE MEDICAL SERVICE IN TIME OF WAR.

General Organization.

The Austro-Hungarian army in war time is not divided as in peace into a "common" army, an Austrian national army and an Hungarian national army, but forms one army composed of all three elements.

Army corps are formed of three infantry divisions as a rule, one of which is probably taken from the Landwehr or Honved, and the others from the "common" army. Each infantry division is composed of two brigades, and each brigade of two regiments of three or four battalions of infantry. In addition, each infantry division has batteries of artillery, ammunition and supply columns, a transport squadron, a divisional bakery, and an infantry divisional medical unit.

The army corps troops consist of a pioneer battalion, bridging, telegraph and field post office sections, corps transport and supply columns, and a corps bakery column; but no medical units are included amongst corps troops, unless an army corps is acting independently.

Army corps are grouped into armies of two to four army corps, and each army may have in addition an independent infantry division and a cavalry division.

The latter is composed of two cavalry brigades of two regiments each, with horse artillery, ammunition and supply columns, transport squadron, and a cavalry divisional medical unit.

An independent infantry division has additional units attached to it from the army command, and amongst these is a field hospital.

The army troops consist of transport companies, telegraph, bridging units, heavy howitzer divisions, ammunition and supply parks, field hospitals, field convalescent depots and reserve medical units.

The number of field hospitals and field convalescent depots are in the proportion of one for each division.

Under the army command large reserves of medical personnel and equipment, including mobile reserve hospitals, mobile rest stations, and a field depot of medical and surgical

stores are held in readiness at the head of the lines of communication. Hospital trains and ships, and material for improvising hospital trains and ships are also included amongst the medical resources held in readiness by an army headquarter staff on its lines of communication. In the home territory the whole of the medical resources available in peace are supplemented by expansion of hospitals according to definite plans, and by a variety of voluntary aid organizations.

During a battle the divisions may be split up into larger or smaller fighting groups, each under the command of the senior officer of the group; while the field hospitals are distributed by the army command to army corps, or to divisions, being brought forward into the area of corps or divisional operations, whenever an action is imminent.

The position and use of the medical units of an army in the field are, in fact, made to depend on the military situation, and this is a point to which the greatest importance is attached in field training. Three situations are recognized in which the position of medical units must vary, namely, strategical concentration or periods of inactivity, an advance without prospect of fighting, and an advance with immediate prospect of an engagement with the enemy. Other military situations are, of course, recognized, but these three are the situations that have the most important influence on the medical units, and determine their position in column of march, in the area of operations, or on the lines of communication. Field hospitals and field convalescent depôts, for example, may become divisional units, corps units, army or lines of communication units according to circumstances, and the same may be said too of units that are normally held further back than these.

A distinction is also made between armies operating in ordinary country and those operating in mountainous country, and this materially affects the organization and equipment of the medical units.

GENERAL MEDICAL ORGANIZATION.

The field medical organization of the Austro-Hungarian army differs in many respects from that of other armies. It has been very elaborately worked out and represents the most modern conceptions of how a medical service should be employed and equipped. It is difficult to determine the exact

zone in which the various units are placed, because, as has just been noted, their position depends on certain military situations, and, besides, a free use is made of the personnel of units waiting on the lines of communication to reinforce temporarily units actively working on the battlefield. It is best therefore to describe them in the order in which they work from the fighting line backwards instead of separating them into field, lines of communication and home territory units, as it has been convenient to do in the case of the French and German armies. The main principles of collection, evacuation and distribution of sick and wounded are clearly recognized, and definite places are selected as the points where these zones commence or terminate, but their position is determined not only by the field army, lines of communication and home territory areas, but also by the three military situations noted above.

The medical units and lines of medical assistance are as follows:—

- (1) The regimental medical service.
- (2) The divisional medical units of infantry and cavalry.
- (3) The field hospitals.
- (4) Field convalescent depots.
- (5) Mobile reserve hospitals.
- (6) Mobile rest stations.
- (7) Advanced depots of medical stores.
- (8) Hospital trains and improvised hospital trains.
- (9) Hospital ships and improvised hospital ships or river boats.
- (10) Fixed rest stations.
- (11) Fortress hospitals.
- (12) Garrison or reserve hospitals.
- (13) Medical and surgical supply depots in the home territory.
- (14) Information bureaux for sick and wounded.

The first seven of these are described as mobile units, the trains and boats as ambulatory units, and the remainder as fixed units.

The hospital trains and the units in front of them may come into the zone of the field army according to circumstances, just as on the other hand all, with the exception of the divisional medical units which are always with the divisions, may be

kept back on the lines of communication according to the military situation.

Material and units are also provided by voluntary aid organizations and are distributed, in a manner peculiar to Austria-Hungary, in all three zones as follows :—

- (1) Teutonic Order's field medical columns with infantry divisional medical units.
- (2) Wounded transport columns of the Red Cross with field hospitals.
- (3) Field hospitals of the Red Cross, as field hospital sections.
- (4) Teutonic Order's hospitals for wounded as mobile reserve hospitals.
- (5) Mobile depots of medical stores of the Red Cross with the advanced depot.
- (6) Hospital trains of the Maltese Order.
- (7) Hospital ships of the Red Cross Society.
- (8) Fixed hospitals, convalescent homes, and rest stations in the home territory.
- (9) Fixed depots of Red Cross material in the home territory.
- (10) Local transport columns in the home territory.

These will be specially noted partly in connexion with regular field medical units of which they form an integral part and partly in Chapter IV.

The officers and men of the army medical corps, *i.e.* the medical detachments of garrison hospitals, are formed in time of war into field medical detachments, which mobilize with and become integral parts of the divisional medical units and field hospitals.

For the mobile reserve hospitals, field convalescent depots, mobile rest stations and improvised ambulance trains, detachments called reserve medical detachments are formed. These detachments form what is known as the reserve personnel, and are used not only as personnel for the above-mentioned units, but also as a personnel which would act independently of them, when required, and improvise various medical posts out of local resources in the area immediately behind the field hospitals.

The place of the medical detachments in the garrison hospitals is taken by Landsturm medical detachments during war.

THE ADMINISTRATION OF THE MEDICAL SERVICE DURING WAR.

The headquarter staff of an army has three main sections, an operations or general staff section, an administration section, and a section for auxiliary or technical services. The medical administration belongs to the third section, which also contains the technical directing staff of artillery, engineer, field telegraph, and legal services. The director of the medical services is called the *Armeechefarzt* and is either a *Generalstabsarzt* or an *Oberstabsarzt I. Kl.* He has a *Regimentsarzt* as staff officer and has an army medical *fourgon* for transport of office and equipment. The headquarter staff of the lines of communication of an army is similarly divided into three sections, namely, military, intendants, and technical sections, the staff for the administration of the medical services belonging to the last section, which also includes the staffs of the director of railways, inspector of transport, legal department, and chaplain's department. The official title of the administrative medical officer of lines of communication is *Sanitätschef beim Armee-Etappenkommando*. He has a staff of one *Regimentsarzt*, 4 chief delegates of the Red Cross Society, 4 assistant delegates and 1 clerk belonging to the Red Cross Society. He is also called the director of medical units in rear of the field army.*

The headquarter staff of an army corps has also three sections, namely, a general staff, intendants staff, and technical services staff, the last section being composed of the directing staffs of artillery, engineers, transport and medical services. The head of the medical sub-section is an *Oberstabsarzt*, who is called the *Korps-Chefarzt*, or principal medical officer of the army corps. He has a *Regimentsarzt* as staff officer, and a delegate of the Red Cross Society is also with him in the field. He is given two mounted orderlies for intercommunication purposes whenever fighting is imminent.

A divisional headquarter staff is divided in exactly the same manner, with the addition of a legal and chaplain's sub-section to the technical services section. The principal medical officer is called the *Divisions-Chefarzt*, and is usually of the rank of *Stabsarzt*. He has no staff officer, but four mounted orderlies are given to him for inter-communication duties when an action is impending, two of whom are subsequently given to

* *Leiter des Dienstes bei den rückwärtigen Sanitäts-Anstalten.*

the officer commanding the divisional medical unit. There are no other administrative appointments in the field, and, generally, the directing staffs for medical services are small compared with those of other armies. With the exception of Red Cross Society delegates and a special sanitary committee on the lines of communication, they have no consulting surgeons, hygienists or other specialists attached to them, as in the German Army. The clerical work is done by a central clerical staff common to all branches of the headquarter staff. Voluntary aid delegates are attached to the staff of the administrative medical officers of army corps and divisions, because of the peculiar distribution of voluntary aid material with field medical units, as noted above.

Fortresses have a fortress principal medical officer called *Festungschefarzt*, while in besieged places the senior medical officer present takes over the administrative medical duties as *Belagerungschefarzt*.

All officers holding administrative medical appointments are on the headquarter staff of their command and receive their orders and instructions from the general officer commanding either direct or through the chief of his general staff. They communicate direct with the general officer commanding only in case of urgency. At other times they act through the chief of the general staff, with whom they are always to keep in touch, especially before fighting commences, during fighting and after the issue of a battle has been decided. They are empowered to issue orders direct to the medical units of their command; but in directing their movements along certain lines of march or altering their positions the concurrence of the general officer commanding or chief of the general staff must be obtained.

All directing and administrative medical officers must be in possession of the medical officer's medical and surgical pouch. The principal medical officer of an army corps has, in addition, a pair of medical and surgical saddlebags, and the principal medical officers of an army and lines of communication have a *fourgon* of medical and surgical material.

The duties of the directing and administrative medical officers, as defined in the field medical regulations, are as follows:—

The *Armeechefarzt* has to co-ordinate the work of the medical services in the zone of operations and on the lines of communication, and to lay down the general measures of

sanitation that are to be applied to the army as a whole. He controls the movements of the field hospitals, mobile reserve hospitals, field convalescent depots and mobile rest stations to the extent of attaching them, as may be required, to army corps. All these units are in the first instance held back as army units on the lines of communication, and the director of medical services determines the time, occasion and manner of their being brought up and distributed to army corps. It is also his duty to organize the arrangements for the clearing of field hospitals after a battle, and the general arrangements for evacuation of sick and wounded, including the establishment of evacuation stations and the fixing of the lines of evacuation. He is responsible for the sanitation of battlefields and for measures to prevent or combat epidemics. He undertakes all duties required under the Geneva Convention and communicates with the opposing army with regard to questions arising in connexion with it. He is also responsible for replenishing losses in medical personnel and material. The deputy director of medical services on the lines of communication is responsible for directing and carrying out all measures required on the lines of communication in connexion with holding medical units ready, forwarding medical and surgical supplies, and sanitation.

The responsibilities of the army corps principal medical officer, in addition to the function of general control of the medical services within the corps, are specially connected with the utilization of local resources and medical units during strategical concentration, evacuation of sick before active operations commence, preparations in anticipation of fighting, and the general arrangements required for evacuation of sick and wounded before, during and after a battle, including the employment of empty supply wagons for their transport.

The principal medical officer of a division has similar duties within the sphere of his division, more especially in connexion with the employment of the divisional medical unit and of sections of field hospitals that may be attached to the division before, during and after a battle. Amongst other duties in this connexion he is responsible for the preparation of vehicles of all kinds for transport of wounded in anticipation of a battle, and for having them brought into their proper place in column of march. He maintains the link between the divisional medical unit and regimental aid-posts,

and keeps the army corps principal medical officer constantly informed regarding the military situation, so far as the number, area and nature of the casualties are concerned.

The special sanitary committee, called the *Salubritätskommission*, is a committee placed under the deputy director of medical services on the lines of communication. It consists of three army medical officers and one pharmacist. The former must be specialists in bacteriology and hygiene and the latter must be a specialist in chemistry. A non-commissioned officer and four men of the medical reserve personnel on the lines of communication are employed with the committee for care of apparatus and as laboratory assistants. Eminent civilians may be employed as consulting hygienists, and medical officers may also be attached to the committee, if necessary, from regiments or medical units. The committee is specially employed in connexion with the investigation and prevention of epidemics. The equipment consists of a microscope, two cases of material for a chemical laboratory and two cases of material for a bacteriological laboratory. There is one such committee for each army. It is entrusted generally with camp sanitation, water supplies, food supplies, disinfection, sanitary police, and so on.

THE REGIMENTAL MEDICAL SERVICE.

(Sanitätsdienst bei den Truppen.)

As already indicated in Chapter II, the personnel for medical service with regimental units consists of officers of the medical officers' corps and a subordinate personnel from the non-commissioned officers and men of the unit itself.

Details of the establishment and equipment are shown in Appendix I.

The general principle is to attach 1 medical officer to each battalion of infantry or similar unit and to have in addition 2 or more medical officers on the staff of a regiment of three or four battalions. Thus a three-battalion regiment has 5 and a four-battalion regiment has 7 medical officers. An independent battalion has 2 instead of 1 medical officer. The medical assistants, who are now replacing the non-commissioned officers of stretcher-bearers, are in the proportion of one to each company, and the stretcher-bearers in the

proportion of 4 to each company. The stretcher-bearers are doubled in mountain warfare. The carriers of medical and surgical equipment are in the proportion of two to each battalion. These men take the place of the battalion medical cart, which most other armies possess, and they carry between them the medical and surgical stores required by the battalion. Thus one carrier carries a surgical and the other a medical knapsack, while both have a supplementary knapsack, strapped on to the main knapsack, that attached to the surgical knapsack containing a case of instruments and that attached to the medical knapsack, splints, spirit lamp, pannikin and tooth instruments. Medical pouches are also carried by these carriers; they contain drugs, chiefly in tabloid form. They are carried on the waist belt like cartridge pouches.

The distinction between the regimental stretcher-bearers of the Austro-Hungarian Army and those of other countries should be noted. They are not only stretcher-bearers in the restricted sense, but they are the trained nursing orderlies of the battalion for duty in regimental dressing stations in battle and regimental sick rooms etc. in billets and camps.

During marches, the sick who are able to march, and those who are suffering from trivial illness, although they may have to be carried, are taken with the unit and treated by this medical personnel. Cases of serious sickness, those whom it is not desirable to retain with the unit, are sent to a collecting point, which is, as a rule, the divisional medical unit, for transfer to the nearest fixed military or civil hospital, or in the event of there being no hospital near, for the purpose of being left in charge of local authorities or sent to a field hospital, or mobile reserve hospital. At this collecting point a careful classification is made and the distribution of the sick to hospitals is carried out in accordance with the classification.

During an action the function of the regimental medical service differs very materially from that of the British regimental medical personnel, and to a considerable extent too from that of other armies. In Austria-Hungary the regimental medical personnel becomes the bearer company of fighting groups and forms aid-posts or dressing stations. There are no stretcher-bearers or bearer companies with the divisional medical unit, and when fighting commences the regimental medical personnel is withdrawn from the units, and is formed up as a bearer company (*Blessiertenträger*

abteilung) behind each fighting group of four or five battalions, brigade or other larger or smaller body. The senior of the medical officers takes command; under him the senior medical assistant has direct charge of the work of the stretcher-bearers. In consultation with the officer commanding the fighting group one or more dressing stations or aid-posts (*Hilfsplätze*) are established at suitable localities, to which the stretcher-bearers bring the wounded and from which the wounded are sent back to the divisional medical unit, in the ambulance wagons of the latter. The position of an aid-post must therefore be near a spot accessible to wagons. The other requirements are that water, straw and firewood should be procurable in the vicinity.

The aid-post work is carried on exactly as in a dressing station. Distinguishing flags with the black and yellow national colours and with the Red Cross are hoisted in a visible position to show where the aid-post is established. By night one or more distinguishing lanterns with the Red Cross are used. The duties are carried out in three sections, namely, a reception section, a section for lightly wounded and a section for severely wounded. Diagnosis tallies are attached and the wounded are attended to and prepared for transport to the divisional medical unit in the ambulance wagons.

The material of the carriers of medical and surgical equipment is supplemented by material kept specially for the purpose of forming aid-posts by the divisional medical unit. This is loaded in wagons, called aid-post wagons or *Hilfsplatzwagen*, which are practically the battalion medical carts of other armies. Only nine are provided for a division, although the division has about 15 battalions of infantry and other troops. The reason of this is firstly in order to effect a reduction in the number of vehicles, and secondly because aid-posts are not to be opened for each battalion, but only one as a rule for each fighting group of several battalions. If, however, the group is fighting over a very wide front and suitable positions for the aid-posts are found, two or more posts may be opened.

The aid-posts are advanced or retired by order of the officer commanding the fighting group, but the medical officer in command of the aid-post may act on his own initiative in an emergency. A portion of the personnel is to be left with wounded who have not been or cannot be removed from the aid-post whenever it retires or advances.

In mountain warfare the regimental medical service is strengthened, because units then act in more independent and isolated columns, the work of stretcher-bearers is more severe, and it is more difficult to maintain touch with army corps communications. The number of stretcher-bearers is doubled and a rope about 30 yards long is supplied to every eight bearers. A pack animal with a pair of field medical and surgical panniers is given to each battalion, so that a battalion can then form its own aid-post. Under these circumstances there are no aid-post wagons with the divisional medical unit. Relay posts (*Wechselstationen*) are formed between the aid-posts and the dressing stations, and bandsmen, officers' servants, local inhabitants, and, after fighting is over, combatant soldiers are employed in carrying the wounded back. The employment of local inhabitants is specially required in mountain warfare because they are accustomed to the hills, and wounded have usually to be carried on the back in back seats, &c., such as are used by hill men in the mountainous regions of Austria and Hungary.

A cavalry regiment has three medical officers on its war establishment. One is the regimental *Chefarzt* and the others are the medical officers of the two divisions (three squadrons each), of which the regiment is composed. There are six mounted medical assistants (or one to each squadron), three mounted carriers of medical and surgical equipment (one to each division and one with the regimental headquarters), and 36 mounted stretcher bearers (six to each squadron). The stretcher-bearers are not permanently employed medical personnel as in the case of infantry. They take part in the cavalry combat as combatants, and fall out for stretcher-bearer duties only after the *melée*. Two men are trained, however, as stretcher-bearers in peace in each squadron yearly, so that, as the men serve three years with the colours, there are at all times six men trained, or being trained, as stretcher-bearers in a squadron of cavalry. Their equipment consists of one stretcher, one leg splint and one surgical haversack for each squadron, carried on the tool wagon of the squadron, and one water bottle for each division carried on the tool wagon of the 3rd and 6th squadrons. The carriers of equipment carry the medical and surgical equipment in saddlebags on their horses.

During a cavalry combat all the medical personnel, except the stretcher-bearers, as noted above, are withdrawn from the

ranks and wait until the *melée* is over. They then proceed to the area over which it has been fought, and form an aid-post, from which the men unfit to rejoin their unit are evacuated to the cavalry divisional medical unit.

THE DIVISIONAL MEDICAL UNIT.

(Divisionssanitätsanstalt.)

The divisional medical unit is the equivalent of the ambulance of the British and French organization, but without stretcher-bearers. It is composed of several sections, each representing one of the functions of an ambulance. In this way its organization is more elaborate than that of the ambulances of other countries.

There are two kinds of divisional medical unit, the infantry and cavalry, the latter being much smaller and less elaborately organized than the former. The infantry divisional medical unit has also an organization for mountain warfare which differs from its normal field organization.

The duty of the divisional medical unit is defined as that of preparing for further transport the sick collected in the unit and the wounded handed over to it. One unit is assigned to each division of infantry or cavalry. It is autonomous as regards economic and administrative control, and is directly under the general officer commanding the division.

The Infantry Divisional Medical Unit.

An infantry divisional medical unit is composed of six sections.

The sections are :—

- (1) The aid-post wagon echelon,
- (2) The lightly wounded station,
- (3) The dressing station,
- (4) The ambulance,
- (5) The ambulance wagon echelon,
- (6) The reserve of medical and surgical material.

To these must be added:

- (7) A field medical column of the Teutonic Order of Knighthood.

All of the sections except the aid-post, ambulance wagon echelon, and Teutonic Order's column are divisible into two identical subsections.

The aid-post wagon echelon (*Hilfsplatzwagenstaffel*) is composed of nine 2-horsed wagons loaded with material for the aid-posts of fighting groups. Some of these wagons may be distributed in column of march to advance guards and to separate columns, so that they may be at hand whenever fighting groups are formed. No personnel of the medical corps is, however, attached to the echelon, the only personnel being the drivers.

The lightly wounded station (*Leichtverwundetenstation*) consists of two medical officers, two 4-horsed field hospital stores wagons, and a portion of the army medical corps rank and file. It is the section of the divisional medical unit which is established earliest during a battle.

There are two reasons for this; in the first instance it is necessary to inform the troops generally of its position in orders for battle, and, therefore, a place is selected early, probably the night before in the case of a planned battle; and, secondly, the lightly wounded are the first to find their way back from the fighting line. It happens, therefore, that the lightly wounded station is not only the first section to be established, but it is established furthest back. The wounded go to it direct from the aid-posts of the fighting groups. Frequently it is merged either in an evacuating station at railhead, if the railway is open for traffic to within four or five miles of the battlefield, or in a rest station on the line of evacuation to railhead. It should not be opened in a locality where the dressing station and ambulance sections are likely subsequently to be established, so as to avoid using for lightly wounded the local resources which may be required for the more serious cases. Its position by day is indicated by a triangular flag with the Red Cross, and by night by Red Cross lanterns.

The dressing station section (*Verbandplatz*) consists of two medical officers, one of whom is the officer commanding the divisional medical unit, two 4-horsed field hospital stores wagons, four 2-horsed general service equipment wagons, and the main body of the medical corps rank and file. It is the central and main portion of the medical service in a division during a battle. It is opened at a spot in advance of the lightly wounded station, but later on in the day; the

locality being selected by the principal medical officer of the division in consultation with the general staff. It is the duty of the officer commanding the medical unit to report himself in person at divisional headquarters, accompanied by the officer commanding the medical corps detachment of the unit, whenever his unit has reached the spot where it is ordered to be drawn up waiting orders. He is then told where the dressing station is to be opened, and at once proceeds to the spot to make preliminary arrangements, while the officer of the detachment returns to the unit to bring it up.

The dressing station is opened in two groups, one for the reception of wounded as they arrive in the ambulance wagons, and the other for the surgical work of the station. In the reception group the wounded are examined as they come in, and are given soup or other food; those of them who do not require to have their wounds dressed, or otherwise treated surgically, are then sent direct to the next section (ambulance section), while others go to the surgical group of the dressing station. In the surgical group emergent operations only are performed, and such dressings or apparatus as may be required to render the wounded fit for further transport are applied. The wounded are then taken to the ambulance section.

The ambulance section (*Ambulanz*) consists of two medical officers, two 4-horsed field hospital stores wagons and a portion of the medical corps rank and file. It is opened in the same locality as the dressing station and is intended for the temporary care of the more seriously wounded, *i.e.*, of those who have not gone to the lightly wounded station. Bedding, medical comforts, food and medical supervision are provided for them in the ambulance section until they are evacuated or taken over by the field hospitals. As the locality selected for the dressing station and ambulance is, if possible, a village with some good buildings, the better class buildings, such as the local inn or hotel, are occupied by the ambulance. The church is generally used for the moribund, and the most comfortable house is arranged as a hospital for those who are not fit for further transport.

The ambulance wagon echelon (*Blessiertenwagenstaffel*) consists of eleven 4-horsed ambulance wagons, with wagon orderlies from the medical corps detachment of the unit. The wagons are used to bring the wounded from the aid-posts to the reception group of the dressing station. They thus

form the link between the regimental medical service and the divisional medical unit. If they cannot go right up to an aid-post, they halt at a spot as near it as possible, called the wagon halting place (*Wagenaufstellungs- or Haltplatz*), which is indicated by a red-cross flag. The wounded are brought to the wagons by the wagon orderlies or regimental stretcher-bearers of the aid-post. The rule is to have half the wagons drawn up at some spot near the reception group of the dressing station, and whenever a wagon is seen returning with wounded from the aid-post, an empty wagon at once goes forward, so that there is a constant exchange of wagons between the aid-posts and the dressing station.

The section with reserves of medical and surgical material (*Sanitätsmaterialreserve*) consists of two 4-horsed field hospital stores wagons under the charge of two men of the medical corps detachment who are pharmacists serving as one-year volunteers. It is drawn up during a battle in the same locality as the dressing station and ambulance section, and is used for replenishing the material of the regimental medical service and the aid-post wagons.

The field medical column of the Teutonic Order (*Deutsch-Ordens-Feldsanitätskolonne*) consists of four 4-horsed ambulance wagons and one 4-horsed fourgon with medical and surgical material. The personnel consists of drivers only; they are soldiers of the reserve of the transport corps. The ambulance wagons are attached to and employed with the ambulance wagon echelon, and the fourgon supplies material for replenishing the dressing station and ambulance, or for forming an aid-post.

The infantry divisional medical unit as a whole is composed consequently of six officers of the medical officers' corps, the senior of whom commands the unit, two officers and about 130 non-commissioned officers and men of the army medical corps forming a field medical detachment, and about 60 non-commissioned officers and men of the train (transport corps).

In addition to this personnel, medical officers and personnel from regimental or other medical units may be detailed for temporary duty with the divisional medical units, or with one or other of its sections.

As a rule, only sub-sections of the lightly wounded section, dressing station and ambulance sections are opened at first; the remaining sub-sections are kept in reserve to open on the

area where most casualties have occurred, whenever the enemy retires and the fighting line advances.

By the division of the sections into identical sub-sections, an independent brigade or column of similar size can have one half of the divisional medical unit attached to it as a brigade medical unit.

An infantry divisional medical unit is designated by the number of the division to which it belongs. It is mobilized at the garrison hospital in which its material is kept and its medical detachment is on duty in time of peace.

In cantonments, camps and billets, it acts as a collecting station for those sick of the division who require evacuation, and its ambulance section becomes a local hospital for the slighter cases of sickness, whom it is not necessary to evacuate.

Appendix II A shows its formation in column of march.

Sick and wounded are evacuated from it to field hospitals, convalescent depots, evacuating stations or other establishments under orders from the army corps staff and by means of empty supply wagons, country carts, or the ambulance wagons of the Red Cross transport column attached to each field hospital. Its own ambulance wagons are not to be used for this purpose except for very short distances, and under special circumstances.

In case of retreat every available vehicle must be used to evacuate the wounded capable of being carried, as well as their arms and equipment. Wounded, who cannot be evacuated, will be left with the smallest amount of material and personnel necessary for their care.

The Infantry Divisional Medical Unit with Mountain Equipment.

The establishment of medical officers and medical corps detachment when an infantry divisional medical unit is equipped for mountain warfare is the same as in the unit with field equipment with the exception that there are four instead of two officers with the detachment, and there is one pharmacist official instead of one of the one-year volunteer pharmacist students. There are no aid-post wagons, field hospital stores wagons or general service equipment wagons, the whole of the material being carried on pack animals.

The transport personnel varies accordingly and, in consequence of the large number of pack animals, an officer of the transport corps is added. A field medical column of the Teutonic Order goes with each unit, just as in the case of the unit with field equipment, but its employment and that of the ambulance wagon echelon depend upon the nature of the roads. In addition, one or more wounded transport columns of the Red Cross, equipped for mountain transport, may be given to each unit.

The dressing station, ambulance, and reserve of material sections have the same equipment as the field divisional medical unit, but the dressing station and material sections are organized in four instead of two sub-sections. The ambulance section remains as two sub-sections. There is no lightly wounded section.

The composition therefore of a divisional medical unit for mountain warfare is:—

- (1) A dressing station section of four sub-sections, each with five pack animals for medical and surgical stores, and six for baggage and supplies.
- (2) An ambulance of two sub-sections, each with nine pack animals for medical and surgical stores, and seven for baggage and supplies.
- (3) A reserve of material section of four sub-sections, each with three pack animals for medical and surgical stores, and two for baggage and supplies.
- (4) An ambulance wagon echelon of 15 ambulance wagons.
- (5) A Teutonic Order's field medical column of four ambulance wagons and one *fourgon* with material.

In addition to the pack animals with sections, there are with the unit as a whole four pack animals carrying tools and field forge, four carrying transport material, and 12 reserve animals, four of which have pack saddles.

The total number of pack animals with the unit is consequently 116.

The formation in column of march is shown in Appendix II B.

The rules regarding the employment of a divisional medical unit with mountain equipment in battle are the same as for the field unit, with the following exceptions:—

- (1) The ambulance is not necessarily established in the same locality as the dressing station, but may

form a post between dressing stations and the next medical unit or evacuation station further back.

- (2) When the ambulance wagons cannot be used on account of the absence of good road communication between the regimental aid-posts and the dressing station, relay stations are established and bearers appointed to carry wounded from one station to another, the men so employed being men of the medical detachment of the unit, men of the Red Cross mountain transport column, or local inhabitants.
- (3) The lightly wounded go to the dressing station and ambulance, but form a separate group in these sections.
- (4) The regimental aid-posts are not supplied with material from the unit. The division of the dressing station and reserve material sections into four sub-sections is intended to enable as many as four isolated fighting groups to be supplied with a medical unit. The ambulance section on the other hand is divided into two, because it does not necessarily go with the dressing station, but may form collecting stations for one or two dressing stations at some point further back.*

The Cavalry Divisional Medical Unit.

(Kavallerie-Divisions-sanitätsanstalt.)

This unit differs very materially from the infantry divisional medical unit. It is a weak unit, and has a personnel of only one medical officer, a medical corps detachment of 27, and a transport detachment of 13 non-commissioned officers and men, with four 4-horsed ambulance wagons, one 4-horsed field hospital stores wagon, and one 2-horsed general service equipment wagon. It forms only two sections, a dressing station and an ambulance wagon echelon. It is designated by the number of the division to which it belongs.

*The regulations also describe an infantry brigade medical unit (*Infanterie Brigadesanitätsanstalt*). A brigade medical unit for mountain warfare is noted as consisting of 1 medical officer, 21 men of the medical corps, and 5 pack animals. Regimental medical personnel is also employed in it.

In camps, cantonments and billets, its function is similar to that of the infantry divisional medical unit; during fighting it is brought up to the area over which the cavalry combat has taken place and establishes a dressing station there, all the available medical personnel of cavalry regimental units being detailed to assist in the work. Material is replenished from an infantry divisional medical unit. For evacuation from the dressing station, the available country carts and empty supply wagons are to be used. The ambulance wagons of the unit are not to be employed for this purpose.

FIELD HOSPITALS (*Feldspitäler*).

The field hospitals on mobilization are army units and are not assigned to army corps or divisions. They are mobilized in the proportion of one for each division of which the army is composed, and during the course of operations may be assigned to army corps, columns, or divisions according to the requirements of the military situation. Their main function is to provide for the temporary care and treatment of large masses of wounded on the area of a battlefield and to set free the divisional medical units as rapidly as possible. They are not, as a rule, opened during periods of inactivity, for example in areas of strategical concentration. During marches they act for the transport columns in the same way as the divisional medical unit for the fighting columns, and would establish collecting stations for their sick. During fighting they are kept in readiness for immediate work whenever the fighting has ceased, but some of the medical officers or personnel may be used during the fighting to reinforce the dressing station.

The field hospitals are self-contained mobile units, having their own transport, and are normally equipped for 600 sick or wounded. Each hospital is composed of a staff and three sections organized for 200 patients each and capable of acting as independent units. In addition, a wounded transport column of the Red Cross is attached to each field hospital.

As in the case of the infantry divisional medical unit the field hospitals are of two kinds, namely, those with field equipment and transport and those organized for mountain warfare.

The personnel of the staff is an *Oberstabsarzt II. Kl.* who commands the units, and a military chaplain. Both are mounted. The remainder of the personnel belongs to the sections, and for each section consists of 3 medical officers, one pharmacist official, one accountant, and one field medical detachment. The command of the section is held by the senior amongst the medical officers, and he alone is mounted. The other officers have a landau or similar carriage provided for their transport. The field medical detachment of each section consists of 1 officer and about 80 men of the medical corps.

The transport material of a field hospital section is eight 4-horsed field hospital stores wagons, one 4-horsed general service equipment wagon, one 2-horsed supplementary wagon, one 4-horsed covered wagon or *fourgon*, chiefly for carrying medical comforts, and the carriage for dismounted officers and officials.*

The attached wounded transport column of the Red Cross consists of fifteen 2-horsed ambulance wagons, and one 4-horsed *fourgon* with equipment. It is commanded by a Red Cross Society's delegate.

In addition to this transport material sixteen 2-horsed supply wagons for food supplies are added to a field hospital column. The formation of the column on line of march is shown in Appendix IIc.

As a whole the Austro-Hungarian field hospital consists, therefore, of 10 medical officers, 1 chaplain, a delegate of the Red Cross Society, 9 other officers or officials, and about 240 men of the medical corps, with transport drivers, etc., for 57 wagons,† of which 38 are 2-horsed and the rest 4-horsed vehicles. As the type of wagon called the field hospital stores wagon is of the same construction as an ambulance wagon and is used as such, when unloaded, each field hospital has with its Red Cross transport column 39 vehicles which can be used as ambulance wagons. They are intended for removing seriously wounded from the ambulance of the divisional medical unit to the field hospital or evacuating station, as well as for the evacuation of wounded from the field hospital itself.

* No. 1 section has two carriages. The other sections only one.

† Including the 16 supply wagons.

Field hospitals are cleared, as a rule, by mobile reserve hospitals or sections of mobile reserve hospitals. They are numbered consecutively and not according to the numbers of divisions or corps. Their mobilization equipment is kept in mobilization stores at each of the garrison hospitals, and the medical corps detachment is formed from the detachments at these hospitals and from medical corps reservists.

When organized for mountain warfare all the field hospital sections have the same transport material as for field operations, but some of the sections are in addition divisible into half sections for 100 patients, each half section having hospital stores carried on 36 pack animals, supplies and baggage on 14 pack animals with 8 pack animals in reserve. The Hungarian Red Cross Society provides each of these half sections with a mountain transport column for carrying wounded, consisting of a number of bearers and two carriages. A field hospital is seldom mobilized complete with mountain equipment on account of the large number of pack animals required, and the pack animal transport and material are added, as occasion demands, to certain sections only. See Appendix IID.

CLEARING HOSPITAL UNITS.

Mobile reserve hospitals.

(Mobile Reservespitäler.)

The mobile reserve hospitals are units organized like the field hospitals for 600 patients, and are divisible into three sections for 200 patients each. They are practically identical with field hospitals, but without their own transport. They are held in readiness on the lines of communication as army units and are mobilized in the proportion of two to each army corps of which the army is composed. They are associated with field convalescent depots and mobile rest stations in the general organization for clearing the field hospitals. They may be described, in fact, as severely wounded sections of a clearing hospital, while the field convalescent depots are the lightly wounded sections, and the mobile rest stations the connecting links in the process of clearing the field hospitals by evacuation to the railway line. Sections of mobile reserve hospitals may also be used as hospitals for infectious diseases in the field.

When strategical concentration takes place a mobile reserve hospital is opened in each army corps area, for the reception of all sick who have to be evacuated when the troops advance. The other mobile reserve hospitals are sent by rail or water to the advanced posts of the lines of communication and are kept ready there to move at once to the area where fighting has taken place, for the purpose of taking over the severely wounded from the field hospital sections.

The personnel is obtained from the reserve medical personnel, held on the lines of communication and formed of medical officers, pharmacist and other officials and medical corps detachments. There are usually five of these reserve medical detachments for each army corps. Each detachment consists of 1 officer and 50 men of the medical corps. The mobile reserve hospitals absorb three of these detachments, one for each section, and ten of the medical officers. The material is obtained from the corps unit of the field depot of medical stores, as described below. A feature in this organization is that the personnel may be, and as a rule is, pushed on in advance of the material, being used in a variety of ways for improvising temporary medical units and posts out of local resources.

Field Convalescent Depots.

(Feldmarodenhäuser.)

The field convalescent depot is mobilized in the proportion of three to each army corps, and, like the mobile reserve hospital, is an army unit held on lines of communication until such time as it is detailed to an army corps or a division. It is organized normally for 500 lightly wounded or sick. One of the three army corps convalescent depots opens in the area of strategical concentration, usually alongside the mobile reserve hospital, for the reception of more trivial cases of sickness and men unfit to march with their units when an advance is made. The personnel of a field convalescent depot is 2 medical officers and half a reserve medical detachment (1 officer and 25 men). The reserve medical personnel supplies this personnel for the two depots not opened in the army corps area of concentration, and the material for these two depots is obtained from the corps unit of the advanced depot of medical stores. (The convalescent depot sent to the area

of concentration mobilizes complete on the outbreak of hostilities and does not draw on the reserve medical personnel of the lines of communication or the advanced depot of medical stores.) The personnel is used in advance of material for improvising temporary medical posts, as in the case of the mobile reserve hospital. The field convalescent depots are brought up, in advance of the mobile reserve hospitals, into the area of fighting, in order to take over the wounded in the lightly wounded section of the divisional medical unit. Subsequently, they take over the convalescents and less serious cases from the *Ambulanz*, the field hospitals or the mobile reserve hospitals.

Mobile rest stations.

(Mobile Krankenhaltstationen.)

A mobile rest station is an organized unit for feeding and providing night accommodation for 200 patients during their evacuation and includes 10 to 15 beds for patients unfit for further transport. Mobile rest stations are mobilized in the proportion of two to each army corps and are army units, being associated with and working in co-operation with the mobile reserve hospitals and field convalescent depots. The personnel of a mobile reserve hospital is obtained from the reserve medical personnel and consists of 1 medical officer and half a reserve medical corps detachment (25 N.C.O.s and men without an officer). The material is obtained from the corps unit of the advanced depot of medical stores. The use of rest stations is a prominent feature in the Austro-Hungarian field medical organization, and, in addition to these self-contained organized mobile units, improvised and fixed rest stations are also recognized in the regulations, the former being rest stations that must be opened whenever the number of the organized rest stations is insufficient to form a post at each halting place or entraining place on the line of evacuation; the latter stations are distributed over all parts of Austria-Hungary, and are organized mainly by the local branches of the Red Cross Society. Rest stations are also differentiated into those that provide food and refreshments only, *i.e.* for midday halts, and those that provide accommodation for the night in addition to food and refreshments.

The field regulations state that it is essential that rest stations, fixed or mobile, should be established at entraining or detraining stations, embarking or disembarking stations, and at the evacuation station (rail head); as well as at those localities along a line of evacuation by road, rail or water, where convoys of sick and wounded halt for a mid-day rest or overnight.

Reserve personnel.

The mobile reserve hospitals, field convalescent depots, and mobile rest stations for an army corps require together a personnel of at least 28 medical officers and 9 officers and 425 men of the medical corps (that is to say, $8\frac{1}{2}$ medical detachments of 1 officer and 50 men each). But as one mobile reserve hospital and one field convalescent depot mobilize for special employment in the area of strategical concentration, only 16 medical officers and 5 detachments are needed for the remaining units. It is these that form the reserve medical personnel and undertake the work of clearing and evacuating the field hospitals.

THE FIELD DEPOT OF MEDICAL STORES.

(Sanitätsfelddepôt.)

The field or advanced depot of medical stores must be included amongst the clearing hospital arrangements of the Austro-Hungarian army, because, in addition to material for replenishing expenditure of stores in the field medical units, it contains all the material of mobile reserve hospitals, field convalescent depots and mobile rest stations, *i.e.* the clearing units, and also the material for improvising hospital trains.

Only one field depot of medical stores is organized for each army but it is composed of a number of army corps units (*Korpseinheit*), each with a personnel and material enabling it to be attached to an army corps and act as an independent depot. The number of such "corps units" corresponds with the number of army corps of which the army is composed.

The staff consists of the commandant, who is a medical officer of *Oberstabsarzt* or *Stabsarzt* rank, accountants and

administration officers or officials, and pharmacist officials, together with men of the medical corps and ordnance department. Each "corps unit" of the depot has its own personnel.

The material of each "corps unit" consists of the complete equipment for—

- (a) 1 mobile reserve hospital.
- (b) 2 field convalescent depots.
- (c) 2 mobile rest stations.
- (d) 2 improvised ambulance trains.
- (e) A reserve of material for replenishing.

It will be noticed that the material of the mobile reserve hospital and field convalescent depot established in the area of strategical concentration of an army corps is not included.

The general system of replenishing material in the field is to supply the regimental medical service from the reserve material section of the divisional medical unit, to supply the divisional medical unit from one of the hospital stores wagons with each section of a field hospital, specially loaded for the purpose, and to supply the field hospitals from the reserve material section of the field depot of medical stores.

The field depot of medical stores must be kept ready packed on the lines of communication in a position from which the material for the various clearing units may be sent forward at once into the area of field operations. When railways or waterways are not available, government wagons must be given for its transport, and the material must be brought up within 48 hours after the demand for it has been made. The material for a section of a mobile reserve hospital is uniformly packed in 58 packages and requires six 4-horsed general service wagons for their conveyance, the total weight being about $5\frac{1}{2}$ tons. If 2-horsed country carts are used it is calculated that 13 vehicles are required. The material of a field convalescent dépôt is packed in 52 packages of about $5\frac{1}{2}$ tons total weight and requires 9 general service wagons or 14 two-horsed country carts. The mobile rest station material is packed in 73 packages, has a total weight of about 5 tons and requires 9 general service wagons or 12 country carts.

The reserve material consists of a complete set of equipment and stores for three sections of a mobile reserve hospital and for two complete improvised ambulance trains.

TRANSPORT OF SICK AND WOUNDED BY RAILWAY.

Two forms of trains for sick and wounded are organized, just as in France and Germany, namely, the permanent hospital trains and the improvised ambulance trains.* The former are used for the evacuation of serious cases of sickness and wounds to the home territory and for their distribution to hospitals in it. The latter are for the less serious cases, which do not require constant attendance, and do not usually go beyond the evacuating zone.

*Hospital Trains.**(Spitalzüge.)*

The personnel of a hospital train consists of a *Regimentsarzt* as commandant, 1 assistant surgeon and 1 apothecary official from the reserve, and a detachment of the medical corps of 34 non-commissioned officers and men. Each train is made up of 26 cars, 18 of which are for the conveyance of patients lying down. The other cars are a car for the commandant, two passenger cars for the personnel, a kitchen car, a car for supplies and equipment, a dispensary car, a car for bedding and stores, and a guard's van. The train is arranged in the following order:—

Engine.

Guard's van.

Commandant's car.

Bedding and stores car.

4 cars for patients.

1 car for personnel.

5 cars for patients.

Kitchen car.

Supplies and equipment car.

5 cars for patients.

1 car for personnel.

4 cars for patients.

Dispensary car.

The cars for patients are the goods vans used in peace on the Austrian railways. They are fitted with eight cots

* The term *Eisenbahn-Sanitätszug*, which in the regulations of 1904 was used to designate a hospital train, is now used as a general term for either kind of train, the hospital train being now called *Spitalzug* and the improvised train *Krankenzug*.

arranged in two tiers; so that a hospital train carries 148 sick and wounded lying down. In peace time the cars allotted for hospital trains on mobilization have a red square painted on the sides; they are not permitted to be used for conveyance of goods outside Austria-Hungary. The four corners of the red square are painted white on mobilization, thus forming the Geneva cross on a white ground. All the cars have end-to-end communication with one another. Thirty-three hospital trains of this character will be ready on mobilization. They are numbered consecutively.

There is another class of hospital train, however, which is specially constructed for the purpose and is more luxurious; namely, the hospital train of the Knights of the Sovereign Order of Malta. There are six of these trains ready and six more will be constructed on mobilization. They carry 100 patients each. A more detailed description will be found in Chapter IV.

Improvised Ambulance Trains.

(Krankenzüge.)

Improvised ambulance trains are of two kinds, the temporary and the permanent. Both kinds are used in the evacuating and in the distributing zone; but as a rule the permanent or normally improvised train is specially employed in the evacuating zone.

For each army corps one permanent improvised train is allotted to the evacuating zone. It is of a definite or normal composition, and consists of one 1st or 2nd class passenger car for the commandant and sick or wounded officers; 1 guard's van, 8 cars each taking eight patients lying down, and 15 cars each taking 20 patients sitting up. The normally improvised train carries, therefore, 64 lying down and 300 sitting up, in addition to officers.

One army medical officer and a medical corps detachment of 25 non-commissioned officers and men, *i.e.*, half a reserve medical detachment, are appointed to each permanent improvised train.

The normal arrangement of the 25 car permanent improvised train is as follows:—

Guard's van.

7 cars for patients sitting up.

- 4 cars for patients lying down.
- Commandant's and officers' car.
- 4 cars for patients lying down.
- 8 cars for patients sitting up.

The temporary improvised ambulance trains are of different types, according to the number of sick and wounded who have to be evacuated and according to the number of railway cars available at the evacuating or distributing stations.

Three types are recognized : (1) a train of 13 cars, namely, 7 for 140 sitting up and 4 for 32 lying down, with a guard's van and a passenger car; (2) a 36 car train composed of the normal train of 25 cars, with the 11 patients' cars of the above small type of train added, carrying thus 96 lying down and 440 sitting up; and (3) a 50 car train, composed of two normal types of improvised ambulance train and capable of carrying 128 lying down and 600 sitting up.

The larger type of train can only be used on certain railway lines, where the curves and gradients permit of its running safely.

In all improvised trains the cars for patients lying down are the goods vans as used for hospital trains; but, instead of fixed cots, Linxweiler or other apparatus are used for supporting the field stretcher. The modified Port system, by which stretchers are slung from the side of the car in much the same way as the upper tier of cots in sleeping compartments, is much used in improvising ambulance trains.

As improvised trains have no arrangements for feeding patients during the journey, railway rest stations or halting places are organized along the line, and meals are served there to the patients passing through.

TRANSPORT OF SICK AND WOUNDED BY WATER.

Rivers and other waterways are recognized lines of evacuation and distribution of sick and wounded; the Austro-Hungarian organization includes permanent hospital ships and improvised ambulance ships for use on them, as well as hospital ships, in our sense of the term, for conveyance of sick and wounded by sea.

The hospital ships (*Spitalschiff* or *Schiffsambulanz*) are composed of grain boats or barges drawn by tugs, and equipped in the same way as hospital trains; or they may be

prepared by an adaptation of the large passenger steamers on the Danube and other rivers, such as the Theiss and the Save. They are numbered consecutively as in the case of hospital trains, and have a permanent staff. One is organized for each army corps.

The improvised ambulance boats (*Krankenschiffe*) are organized in the same way as improvised ambulance trains, and consist of a number of barges or river boats, drawn by one or more steam tugs, and fitted with accommodation for patients lying down on stretchers or sitting up; of barges without any special fittings; of large passenger steamers not specially converted for hospital purposes, or of the smaller steamers modified to some extent for carriage of sick and wounded.

The large passenger steamers converted into hospital ships are calculated to carry 120 lying down, and when not so converted about 50 lying down, or about 100 sitting up. The grain barges take 80 lying down. The smaller steamers, fitted with improvised arrangements, are calculated to carry, for short journeys of 6 hours, either 60 sitting, or 30 sitting and 10 lying down, or 20 lying down and none sitting. For longer journeys the estimated accommodation is for only two-thirds of these numbers. The ordinary barges adapted for improvised carriage of sick and wounded will take 120 sitting and 30 lying down for short journeys, or 80 sitting and 20 lying down for long journeys. When not specially adapted, they are calculated to carry 106 sitting and 16 lying down for short journeys, and 64 sitting and 12 lying down for the long journeys.

The personnel for the improvised hospital ships on rivers is one non-commissioned officer for each barge or small steamer, and 12 men for every 100 patients.

Hospital ships for transport of sick and wounded by sea are organized, so far, only by the Trieste branch of the Red Cross Society, as noted in Chapter IV. They are called *Seeambulanz*. Similar ships organized for use with the Navy are called *Ambulanzschiffe*.*

* It will be found useful to note the signification of the different terms used for medical units which are organized for transport of sick and wounded by water. The general term *Sanitätsschiffe* is applied to transport by rivers only, and includes *Spitalschiffe*, *Schiffsambulanz* and *Krankenschiffe*. *Seeambulanz* and *Ambulanzschiffe*, the former military and the latter naval, are terms used only for hospital ships at sea.

FIXED MEDICAL ESTABLISHMENTS.

The fixed medical establishments in the home territory to which the sick and wounded will be distributed for treatment consist of the permanent military hospitals expanded according to requirements, or of hospitals specially opened on mobilization as reserve hospitals. Details as to the places where these will be opened and the extent of the accommodation which is to be provided are worked out in time of peace and noted in mobilization and other instructions. The general administration of and work in these establishments is the same as in peace; but there are a few rules regulating mainly the method of dealing with the disposal of arms and equipment of men not likely to recover soon and of convalescents. Convalescent officers will be disposed of under instructions from the headquarters of the military district; other ranks will be sent with their kit, arms and accoutrements to the depot of their unit.

In addition to the regularly organized military establishments, auxiliary reserve hospitals, convalescent homes, rest stations, and other assistance in connection with the distribution of sick and wounded are organized throughout the dual monarchy by voluntary aid societies, &c. Civil hospitals may be taken over for military purposes, if necessary.

All the measures required in connection with these are carried out by the military district commanders or by the War Office.

As regards the base depôts of medical stores, no special depot is formed on mobilization, but a reserve for replenishing the material of the advanced depot of medical stores is maintained at the clothing and equipment depot, at No. 1 Garrison Hospital, Vienna, and at the central depot for medical and surgical stores. Sufficient material is got together on mobilization for the estimated requirements of the first three months, and subsequently for one month in advance. A reserve of material on the same scale for the purpose of expanding the hospitals and equipping new hospitals at selected places is kept at these places and also in several of the garrison hospitals.

The information bureaux for sick and wounded are specially organized and worked by the voluntary aid organizations. (See Chapter IV and Appendix III.)

EVACUATION AND DISTRIBUTION OF SICK AND WOUNDED.

The Austro-Hungarian field medical regulations contain chapters dealing with the medical arrangements required in areas of strategical concentration and with the evacuation and distribution of sick and wounded from the field army. They are instructive and as such deserve special notice.

During strategical concentration.

When troops move to the areas of strategical concentration, sick who are unable to accompany their units or continue the journey are to be sent to those garrison hospitals which are selected for expansion, or which will be specially established on mobilization. The fixed rest stations will be established along the lines of concentration, and the sick will be collected at them in the first instance. Further, at all railway stations, where no fixed rest stations exist, but where there is a station staff or refreshment station, and at places where troops will halt for the night, special accommodation will be prepared for the reception of sick, who are not fit to be moved. The personnel required for these posts is laid down in the mobilization instructions; the material is kept in the war reserve stores held in garrison hospitals for the purpose of establishing reserve hospitals in war, expanding existing hospitals and providing for these rest stations. A military surgeon or civil practitioner in the locality will take professional charge of the sick who are unable to be moved, and the subordinate personnel will be obtained from the station staff officer or from amongst local inhabitants. Only the more serious cases are left or collected at these posts for transfer to the military hospitals. They take with them their full equipment, arms and accoutrements.

All medical establishments or posts on the lines of movement to areas of strategical concentration are to be cleared as rapidly as possible.

The arrangements for the area of concentration have already been referred to in describing the mobile reserve hospitals and field convalescent depots. Special regulations are made for preventing epidemics in these areas, and, if necessary, for establishing infectious diseases hospitals. Sanitary committees, specialists in hygiene, and medical practitioners acquainted with the local conditions may also be appointed to assist in the prevention of disease in concentration areas.

During an advance.

When the troops advance after strategical concentration the men who become inefficient from disease or wounds must be sent back by systematic evacuation from the area of operations and distributed to the fixed establishments in the home territory.

The principles, upon which the system of evacuation is based, are to retain within the area of operations cases not suitable for transport and all the trivial cases of sickness and wounds likely to be fit for duty in a few days, to send those who require more prolonged treatment but are likely to be again fit for duty in the field only to fixed establishments in or near the lines of communication, and to distribute generally throughout the fixed or voluntary aid establishments in the home territory all other cases whenever they are rendered fit for transport.

Zones of collection, evacuation and distribution.

Special terms are used to represent the different areas of removal of these three classes of cases; thus the removal of patients from their units within the area of field operations is called "transferring" (*Abgabe*), the process of moving them on the lines of communication is called "evacuating" (*Abschub*), and that of sending them to hospitals in the home territory is called "distributing" (*Zerstreuung*). The transferring process is generally carried out under divisional or army corps arrangements, and is usually a movement by road; the evacuating process by army commands and the distributing process by the War Office; they are usually movements by rail or river transport.

Transfer and evacuation may, however, overlap and be difficult to distinguish from one another, as the former term is also used for the removal of patients to any place selected as an evacuating station by the army headquarter staff.

Method of regulating evacuation.

The general direction of evacuation is effected by the headquarter staff of army lines of communication, and includes the following duties:—

- (1) The regulation of the transfer of sick and wounded to the evacuating station, determining the routes

to be taken and preparing the medical posts on these routes.

- (2) The preparation of evacuating stations, the maintenance and employment of transport material, such as hospital trains, for further movement of sick and wounded, and arrangements of medical posts along the lines of evacuation to the distributing stations.
- (3) The preparation of the distributing stations when this duty is not undertaken by the War Office.
- (4) Direct assumption of all duties connected with transfer and evacuation whenever there is great pressure in dealing with masses of wounded.

Lines of communication defences and other establishments on the lines of communications make their own arrangements for evacuation to the distributing stations.

Classification of patients for evacuation.

In order to give proper effect to the principles of transfer, evacuation and distribution, a careful classification of sick and wounded into different categories must be made at the field medical units first of all, and subsequently both at the evacuating and distributing stations.

In classifying cases men unfit for transport and cases of infectious disease have to be specially provided for, and, for transport by rail or water, a distinction would be made between men requiring lying-down accommodation and those capable of conveyance sitting up, only the former being loaded into the hospital trains and hospital ships.

The cases which are regarded as *unfit for transport* are moribund cases, men suffering from shock or great loss of blood; cases with hyperpyrexia; wounds of the laryngeal region before a tracheotomy operation has been performed; fractures of the large bones and wounds of the larger articulations, before the limbs have been immobilized; wounds exposing the larger cavities; complete destruction of limbs before amputation; and extensive burns. Infectious diseases are regarded as fit for transport only in exceptional circumstances and under special precautions; but cases of trachoma and venereal disease will always be evacuated.

Intermediate collecting stations.

Routine transfer of patients to the evacuating station takes place daily from the field medical units, but frequently it may be necessary, on account of the distance, to form an intermediate station for the collection of transfers from the several field medical units. Such an intermediate station is called a collecting station (*Krankensammelstation*), and is formed by one of the mobile rest stations as a rule.

Arrangements after a battle.

When, however, great battles have been fought and there is a mass of wounded to be dealt with, special arrangements are made, under which the direction of affairs within the area, where the wounded have been collected, is undertaken by the principal medical officer on the headquarter staff of the army lines of communication. He is sent to the area under instructions of the army headquarter staff. He becomes then the director of evacuation and is given a special staff, consisting of a general staff officer, a military intendance official from the headquarter staff, and, if necessary, a representative of the director of railways and the director of river transport. He is also provided with a subordinate staff of clerks and supply officials, and officers of the medical and transport reserve personnel.* With this staff he takes over direct management of all the arrangements for clearing the area of the wounded and, if necessary, may divide it into sub-areas or groups, each with an army medical officer in charge, who is usually the commandant of a field medical unit in the sub-area. Vehicles for transport of sick and wounded and convoy personnel, including, if necessary, field police and lines of communication troops as escort, are supplied to each group. Routes to the evacuating station must also be assigned to each group and provided with mobile or improvised rest stations.

The medical officer in charge of each group reports daily to the directing medical officer the number and category of wounded in each medical unit of his group, and the number fit for transport on the following day. The directing medical officer, from the information thus received and with direct

* *i.e.*, of the mobile reserve units, etc.

knowledge of the accommodation in the evacuating station and of the transport material available, determines how many and which field medical units can be evacuated daily. He is thus in a position either to completely clear one group before proceeding to clear another, or to clear some of the wounded from several groups at the same time. The former process has the advantage of setting free complete field medical units early. The latter process is best when it is not essential to advance immediately, as it gives more time for the treatment and preparation for subsequent evacuation of the more serious cases, as well as for more careful classification of wounded previous to evacuation. It also enables evacuation to take place along several lines, and so avoids overburdening with work one set of rest stations. Under all circumstances however it is important to clear completely one or more of the field medical units as rapidly as possible and this may be done by transferring cases unfit for evacuation to another unit in the neighbourhood, or by sending a section of a mobile reserve hospital to take them over on the spot.

Orders are issued by the medical officer directing the arrangements to the medical officers in charge of the groups, to the commandants of each line of communication and to the commandants of each evacuating station. Medical officers in charge of groups give the necessary directions for carrying out the orders to the medical units of the group, and take the necessary steps for forming convoys, providing convoy personnel and moving them into position in column of march.

Evacuation by road.

As the process of transfer to the evacuating stations is usually by road, special rules are given regulating the manner in which this duty is to be performed. Convoys of about 100 sick and wounded each are to be formed each day, and medical officers and men of the medical corps, field police as escort, cooks, cooking utensils, food and medical comforts will be supplied as the circumstances demand. The convoy personnel attends to the patients during the journey, prepares the mid-day meal if necessary, and arranges for the return of transport material for further convoy duty. The senior amongst the medical officers takes command and is given march orders or a plan of march, stating times, routes, halting places, and directions regarding supplies. Morning

and evening meals will be served at the rest stations, where the patients halt for the night; the mid-day meals may also be provided there, or by the convoy personnel, or by the staff at some intermediate post. Country carts are calculated to carry 2 lying down or 4 sitting up. They will be specially prepared by the convoy personnel, and in fine weather the patients may remain undisturbed in them during the night, instead of being unloaded and placed in buildings. As a rule there will be one attendant of the medical corps for every 20 or 30 patients; the number of other convoy personnel will be determined by circumstances.

Field railways may be available sometimes for the transfer of sick and wounded. The rules for transfer by road are also applicable to this mode of transport.

Formation and duties of an evacuating station.

The process of evacuation commences at an evacuating station. This is the place where sick and wounded are taken over from the army corps or detached columns and formed into convoys for further removal to the distributing stations or home territory. Whether there shall be one or more evacuating stations for each army is determined by the number of the railway or river lines of communication leading to the distributing stations as well as by the grouping of the units forming the army. The place will be selected by the headquarter staff of the lines of communication, and, as a rule, will be at rail-head or the head of a river line of communication, and in a town or village with sufficient resources. A mobile reserve hospital, a field convalescent depot and a mobile rest station will form the nucleus of an evacuating station. The rest station is for those sick and wounded who are only passing through on their way to the distributing zone and who remain for one night only at the station, the mobile reserve hospital is for those severe cases whose condition does not permit of further transport for the present, the field convalescent depot is for the slight cases likely to recover soon.

The importance of the evacuating station is such that the station commandant must be a staff officer on the active list with an army medical officer as his technical assistant. He is given a special staff consisting of a representative of the director of railways and of steamer transport, an intendant

official of the headquarter staff of the lines of communication, and representatives of the voluntary aid associations and of the local civil authorities.

The duties of this staff are :—

- (1) To receive all sick and wounded as they come in, and to classify them or check previous classification.
- (2) To determine who are to be retained and sent to the mobile reserve hospital as unfit for further transport, or to the field convalescent depot as likely to recover soon, and to hand the remainder over to the rest station.
- (3) To prepare the convoys for evacuation to the distributing station and to send intimation regarding them down the line.
- (4) To prepare transport material, such as improvised hospital trains or steamers.
- (5) To arrange for the care and other needs of the patients during the journey.
- (6) To provide convoy personnel.
- (7) To prepare or complete the necessary documents of the patients, who are being evacuated or who are coming in.
- (8) To requisition material for replenishing expenditure.

In order that the evacuating station may always be ready to receive sick and wounded, who are transferred to it, constant evacuation from it must be maintained by evacuating the patients to the distributing stations or to fixed establishments on the lines of communication, or by sending convoys of men, who have recovered, back to their units.

Formation and duties of a distributing station.

The distribution of sick and wounded amongst the fixed establishments in the home territory is directed by the War Office, and commences at distributing stations, which, as a rule, are placed at the bases of the lines of communication.

The work at distributing stations is directed by a station staff similar in composition to that of an evacuating station. The duties are also similar. If there are no fixed reserve hospital, convalescent depot and rest station at the locality selected for a distributing station it is the duty of the War Office to arrange for establishing such units there.

The War Office may decentralize the work of distribution by assigning to each distributing station a distribution area, and letting the commander of the territorial district, in which the distribution area may be included, carry out the work of distribution to the medical establishments in the area.

FIELD MEDICAL EQUIPMENT.

A special feature in the Austro-Hungarian field medical equipment is the part taken by the voluntary aid associations in connexion with the cost of providing material of all kinds. In consequence of the fact that the sum which can be granted from the national revenue for the medical preparations for war is inadequate, it is a recognized principle in the dual monarchy to complete the necessary field medical equipment by means of voluntary contributions. Members of the Orders of Knighthood and of the Red Cross Societies are consequently a body of men and women, who submit, by subscriptions to their society, to a form of voluntary taxation in order to increase the parliamentary vote for field medical equipment. By means of this voluntary assistance, a very considerable amount of the field medical equipment is provided and maintained, chief amongst which are the first field dressings, the ambulance wagons attached to field hospitals and divisional medical units, and hospital trains. This is more fully detailed in Chapter IV.

Surgical dressings and instruments.

The first field dressing is a small package measuring $2\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{3}{4}''$ and contains two compresses, each formed of a pad of absorbent wool between five layers of gauze, and a gauze bandage $4\frac{1}{3}$ yards long and $2\frac{1}{2}''$ wide. One of the compresses is free, the other is sewn on to the bandage. The contents are wrapped in a special cellulose paper, which is sealed by a special gum, "collodin."* The package is placed in a waterproof cloth cover, bound with tape tied by a lead seal. There are no directions on or in the packages. Until recently the compresses were impregnated with an antiseptic, vioform; they are now prepared without any antiseptic, but

* Collodin is a proprietary article, manufactured by the Klebstoff Werke, Mainpur, near Frankfurt-on-Main.

they are sterilized by steam. The special paper and "collodin" gum are not damaged by the process of sterilization. The paper is pervious to air or superheated steam. The packages are consequently put into the sterilizer after they have been bound and sealed. Occasionally during the process of sterilization, the paper cover or its fastening bursts; such packages are wrapped in a fresh covering and sterilized again. The first field dressing is carried by each officer and man in the same way as in the British Army, in the left inside flap of the tunic.

The dressing material carried for use with the regimental units and divisional medical units consists only of prepared dressings made up, like the first field dressing, in separate packages. These prepared dressings are called *Verbandtypen* and are of three sizes, large, medium and small. The contents of each are a calico bandage, two pieces of absorbent gauze, a piece of absorbent wool, and two safety pins. The size of the package is determined by the difference in the sizes of the bandage, gauze and cotton wool. Thus the large type of dressing has the gauze in two pieces of 14 square inches each, the medium type gauze of half that size and the small type gauze of one quarter the size. The bandages are $3\frac{1}{2}$ " bandages, that of the large type being 6yds. and that of the medium and small 5yds. in length. The amount of absorbent wool is 1oz. in the large, about $\frac{1}{2}$ oz. in the medium and $\frac{1}{8}$ oz. in the small type. These dressings are also wrapped in cellulose paper and sealed with "collodin." They are then sterilized by superheated steam.

The packages are of the following dimensions approximately:—

Large type of dressing	...	...	$3\frac{3}{4}" \times 2\frac{1}{4}" \times 1\frac{1}{4}"$
Medium "	"	...	$3\frac{3}{4}" \times 1\frac{1}{2}" \times 1"$
Small "	"	...	$2" \times 1" \times 1"$

Surgical silk is the only material used for sutures or ligatures. It is carried in glass tubes rolled on ebonite spools and sterilized at 110° C.

For the field hospitals and medical units further back the dressing material is put up in bulk and compressed. The material used is absorbent wool, in 50, 100 and 500 gramme packages; calico bandages, $3\frac{1}{2}"$ and $4"$ wide, in single bandage packages or in packages of 18 each; starch bandages and gauze bandages in similar packages. Packages measuring

7" $\times$ 3½" $\times$ 3½" containing 40 compressed 3½" bandages each are made up for these units. Fifty starch bandages in five sets of 10 bandages are also made up in compressed packages. Crude wool is used for padding splints and is supplied in packages of 60 pieces of 50 grammes each. Esmarch bandages are compressed into packages of 18 or 10 bandages. Absorbent gauze is cut into pieces of 32" $\times$ 39" and put up in packages of 25 pieces each.

Very little material is supplied impregnated with antiseptics, but a certain amount of the gauze dressings is so impregnated and distinguished by the following colours. A red package contains gauze impregnated with 10% of xeroform (iodochlor-oxychinolin), a blue package gauze with 10% vioform tribromphenol-bismuth), and a grey or violet package gauze with 5% of corrosive sublimate.

Method of carrying medical and surgical material, etc.

Each medical officer has a pouch slung from the right side of the sword belt when dismounted, and from the right side of the saddle, when mounted. In the body of the pouch he carries a pocket case of instruments, a note book, field message book, case for map, case with soap and nail brush, and a leather case with one medium and one small type of dressing. In an outer pocket there are stoppered bottles, hypodermic injection syringe and tabloids, surgical silk, adhesive plaster, and a book of diagnosis tallies. The tallies are of two colours, red and white, the former indicating a slight and the latter a severe wound. Medical officers also have a few tooth extraction instruments in a leather case, which is carried by one of the *Bandagenträger*.

The medical assistants carry pouches attached to the waist-belt. The contents are an orderly's dressing case with razor, nail brush and soap, safety pins, needles and silk thread, a 50 gramme packet of cotton wool, 3 roller and 5 triangular bandages, 3 medium and 1 large type of dressing, an elastic bandage and adhesive plaster.

The surgical pouch, carried by each stretcher-bearer, is similar to a cartridge pouch and contains 10 of the small type of dressings, 50 grammes crude cotton wool, 2 triangular and 3 roller bandages, 5 safety pins, a drinking cup and knife. A stretcher squad of 4 bearers also carries two leg splints, 4 extra water bottles and a lantern.

The bulk of the material for regimental service is carried, as already noted, by the *Bandagenträger*. It is carried in knapsacks. One of the *Bandagenträger* of the battalion carries a "surgeon's requisites" knapsack (*Aerztliches Requisitentornister*) and the other a dressing material knapsack (*Verbandtornister*); and to each knapsack is attached a supplementary pouch, called the *Stütztorner*. The "requisites" and "dressings" knapsacks are exactly similar in outward appearance, and are distinguished only by a brass plate with the name. The dressings knapsack contains nothing but packages of the different types of dressings, namely 70 small, 26 medium and 13 large. Its supplementary pouch contains a small case of instruments. The "requisites" knapsack contains 20 roller, 21 starch, 1 elastic web and 16 triangular bandages, 50 diagnosis tallies, surgical silk, irrigators, towels, needles, pins, nailbrushes and soap, sublimate solids, scissors and knife. In its supplementary pouch there are 30 wooden splints, each $12'' \times 3\frac{1}{2}''$, a spirit lamp and the tooth extraction instruments of the medical officer.

In addition to the knapsacks and their supplementary pouches, the *Bandagenträger* also carry on their waist-belts in front a pouch called the *Arzneitasche*. The pouch which goes with the material knapsack contains 2 bottles of chloroform (70 grm. in each), morphia tabloids and morphia solution; the pouch with the "requisites" knapsack contains spirits of ether, morphia, Dover's powder and aperient tabloids, and tincture of opium.

The *Bandagenträger* of mounted units carry the material in a pair of "dressings" and a pair of "requisites" saddlebags.

The material for medical units is carried in panniers or boxes in wheeled vehicles such as the aid-post wagons, the *fourgons*, and field hospital stores wagons. The details of their contents and methods of packing are minutely described in the appendix to the field medical regulations.*

In field medical units with mountain transport the material is carried in pairs of waterproof panniers on pack saddles. The details carried by each pack animal of the sections of divisional medical units and field hospitals are also minutely described in the appendix to the regulations.

* Beilagen zu dem IV Teile des Reglements für den Sanitätsdienst des k. und k. Heeres.

Stretchers.

There is only one form of field stretcher, but for hospital trains a special stretcher cot, which can be used as a stretcher is provided. The medical personnel is trained also to improvise various forms of stretchers out of material which may be found on the spot, such as branches of trees, rope, &c.

The field stretcher is practically a stretcher bed, and is formed of two wooden poles, a head and footpiece, and canvas bottom. The canvas is strapped to the foot and head piece by web or leather straps, and it has stitched hems along the sides, into which the poles are run. The head end of the canvas is double and can be filled with straw, &c., to form a pillow. It is attached to the upper bar of the head piece, so as to be on an inclined plane. The head and footpiece have iron rings into which the poles are slipped. When stretchers are folded the poles are slipped out of the hem and rings, and the canvas bottom, head and footpieces are rolled up together. A pair of slings is supplied to each stretcher.

The stretcher bed for railway trains is somewhat similar, but it is wider and the bottom is made of crossed webbing, without a pillow piece.

Wheeled Transport of the Medical Service.

Special vehicles used for carriage of medical and surgical equipment are the aid-post wagons, the field hospital stores wagons, and the covered *fourgons*. For special transport of sick and wounded there are ambulance wagons and field hospital stores wagons.

The aid-post wagons are all loaded with identically the same material, namely, four tin cases and three small panniers. Two of the tin cases called "Type" cases, are marked "T," and contain each 50 small, 100 medium and 50 large types of dressings, together with a packet of 32 yards absorbent gauze, two 1-lb. packets of absorbent wool, 30 triangular bandages, and 6 yards of jaconet. The other two tin cases called "Requisite" cases, are marked "R," and are packed alike with various forms of bandages, cotton wool for padding splints, irrigators, anæsthesia apparatus, needles, safety pins, diagnosis tallies and other requisites. Two of the small panniers are packed with medical comforts and utensils; the third with packages of bandages, cotton wool, 50 large types of dressings, and a medicine chest.

The field hospital stores wagon is exactly similar in construction to the ambulance wagon, and is intended to be used as such when unloaded. Although called a field hospital wagon (*Feldspitalspackwagen*), it is a form of vehicle belonging to the divisional medical units as well as to field hospitals. Each of the wagons can carry four patients lying down on field stretchers. The transport material for lying-down cases is thus very considerably augmented in the field medical units. Both the upper and lower tier of stretchers are slung in leather loops attached to the sides and to central stanchions.

As already noted there are two field hospital stores wagons with each dressing station, ambulance, lightly wounded and reserve material section of the divisional medical unit.

The "dressing station" wagons carry each 2 "Type" cases and 2 "Requisite" cases, similar to those of the aid-post wagons, 1 pannier with material for operations, 1 pannier with bandages, 1 with cotton wool, 1 pannier with kitchen utensils and some medical comforts, 1 large lantern chest, and one office chest. As a detached sub-section does not require a full supply of books and stationery, the office chest of No. 2 wagon is a small chest similar to the officers' baggage trunk, and this wagon carries, in addition, a medical comfort pannier, with a reserve of medical comforts. Each of the wagons carries also 10 stretchers, 8 leg splints, 40 arm splints, 12 torches, an operation table, a field filter, 4 water-buckets, 15 litres rum and 15 litres wine in barrels, 16lbs. of rice, 40 tins preserved meat, 2 cooking vessels (40 and 42 litre capacity) nested, and other material for a dressing station. Each of the two field hospital stores wagons of the "lightly wounded section" carries 3 "Type" cases, 2 "Requisite" cases, 1 operation pannier, 1 bandage pannier, 1 kitchen pannier, and 1 lantern chest. These contain practically the same articles as the corresponding cases and panniers of the dressing station section. The additional articles carried on each wagon include 15 light blankets, 55 winter blankets, 6 stretchers, 30 arm splints, 12 torches, a field filter, 4 water buckets, a 15-litre barrel of rum, 16 lbs. rice, 40 tins preserved meat, 2 cooking vessels (40 and 42 litre capacity) nested, and some other material.

Each of the two field hospital stores wagons of the "ambulance section" carry 1 "Type" and 1 "Requisite" case, 1 operation and 1 bandage pannier, 2 kitchen panniers, 1 lantern chest and 1 office chest. The operation panniers, bandage panniers and kitchen panniers differ somewhat as

regards contents from the corresponding panniers of the other sections, the chief difference being in the kitchen panniers, which contain a greater number and variety of utensils, although the same amount of medical comforts. The additional articles carried on each of the wagons include 20 light blankets, 20 mattress cases, 20 pillow cases, 50 linen sheets, 6 field stretchers, 4 leg splints, 20 arm splits, 6 torches, an operation table, a field filter, 2 covered water buckets and a 10-litre water tank, a 10-litre barrel of rum and a 30-litre barrel of wine, a small tool chest and other articles.

The two field hospital stores wagons of the "reserve material section" carry each 1 special dispensary and medicine chest, 1 "Type" case, 2 panniers for cotton wool, 1 pannier with material for replenishing the "Requisite" cases and 1 for replenishing the "Type" cases, 1 pannier (*Sanitätskorb*) with a variety of material for replenishing the bandage panniers. The additional articles carried on each of the two wagons include 6 field stretchers, 15 leg splints, 50 arm splints, a pair of knapsacks, supplementary knapsacks, and pouches for *Bandagenträger*, an operation tent, and some other articles. On one of the wagons a flare light apparatus (Kohl's apparatus) is carried with 63 litres of petroleum in the reservoir; an operation tent is carried on each wagon.

The equipment of a cavalry divisional medical unit is packed in one medicine chest, 2 "Type" and 2 "Requisite" cases of dressing material and bandages, one operation, one bandage and one requisites pannier, identical with those of the infantry divisional medical unit, a kitchen pannier, a large lantern chest, and an office box. In addition the wagon carries, amongst other articles, 10 field stretchers, 10 mattress and 10 pillow cases, 12 light blankets, 30 sheets, an operation table, a field filter, a 15-litre barrel of rum and 30-litre barrel of wine, 18 torches, 40 arm and 6 leg splints, 2 cookers with some medical comforts, such as rice and coffee, packed in them. Two small tents are carried in ambulance wagons.

The medical and surgical stores, hospital bedding and stores, and medical comforts for each section of a field hospital are carried as follows:—

All the drugs and dispensary equipment are packed in 9 boxes, numbered 1 to 9. Numbers 1 to 3 contain drugs, and are lined with green baize. Numbers 4 to 8 contain chiefly dispensary equipment. No. 9 contains a Spiring's "*Wind-ofen*." All except number 9 are painted yellow. These boxes

are carried in the general service equipment wagon (*Rüstwagen*) of the section. The covered wagon (*Deckelwagen*) or *fourgon* of the section contains a reserve of rations and comforts which include 600 preserved meat rations, rations of invalid biscuits and ordinary biscuits, tinned milk, chocolate coffee, tea, extract of beef, 2,000 portions of tinned soup, 36 litres of cognac, and 24 litres of rum for consumption with tea. The surgical equipment, bedding and other hospital requirements are carried in the 8 field hospital stores wagons of the section. These wagons are packed differently. No. 1 carries 10 panniers, chiefly with gauze and cotton wool, splints, and some kitchen utensils, a quantity of hospital clothing and other articles. No. 2 carries two tin cases of instruments and appliances, 8 tin cases of material for dressings, and hospital clothing, bedding and other articles. No. 3 wagon carries kitchen and cooking utensils, packed in 6 steam cookers. No. 4 wagon contains some ward equipment, linen sheets, mattress cases, and pillow cases. Nos. 5, 6 and 7 carry blankets, sheets and mattress cases. No. 8 wagon carries the reserve material, and is packed similarly to No. 2 field hospital stores wagon of the reserve material section of the divisional medical unit. Four field stretchers are carried on each of the wagons, and torches, splints and other material are also distributed amongst the wagons.*

The material of reserve field medical units, namely, the mobile reserve hospitals, field convalescent depots and mobile rest stations, forms part of the advanced depot of medical stores. As already noted, it is kept in separate "corps units" for each army corps, and the material for two improvised trains and reserve material for replenishing expenditure also form part of a "corps unit" of the advanced depot. The advanced depot has a special section for dispensary requirements, namely, a complete normal dispensary equipment for mobile reserve hospitals, packed and loaded in the same way as for the field hospital; and a supplementary equipment of drugs and dispensary material for every two army corps, packed in 16 cases and carried in three general service equipment wagons. The "corps unit" material is kept in

* The loading and unloading of the field hospital stores wagon and other wagons used for carrying the material of field medical units form part of the training of subordinate personnel of the medical service. Four men are assigned to each wagon and practise loading and unloading of the material by word of command.

4 separate departments; namely, mobile reserve hospital sections, field convalescent depots, mobile rest stations, and two improvised ambulance trains and reserve material.

Each section of a mobile reserve hospital has 57 packages, each convalescent depot 52, each mobile rest station 73, and the two improvised ambulance trains and reserve material department 464 packages, of which 171 are exactly similar to the 57 of each of the three sections of a mobile reserve hospital, and are marked 1 to 57*a*, 1 to 57*b*, and 1 to 57*c*; the remaining packages are marked 58 to 293, and contain, amongst other things, the material for improvising the two ambulance trains; this includes a large number of railway stretcher cots and field stretchers.

When the material of an advanced depot of medical stores has to be conveyed by road, government or locally requisitioned wagons are supplied, and, as already noted, a section of a mobile reserve hospital requires 7, a field convalescent depot 6, and a mobile rest station 6 four-horsed general service equipment wagons; about twice that number of two-horsed locally requisitioned wagons, carrying $\frac{1}{2}$ ton each, would be required. A complete "corps unit," which includes the material for two improvised ambulance trains and reserve material for replenishing, as well as that of one complete mobile reserve hospital, two convalescent depots and two mobile rest stations, requires 79 general service wagons, or 167 of the smaller two-horsed country carts.* Although, with the exception of one general service wagon for the dispensary of each section of a mobile reserve hospital and two for the reserve material, no transport is assigned on mobilization until actually required, the method of loading and packing the material of a "corps unit" of the advanced depot of medical stores for transport by road on the general service wagons and on country carts is minutely detailed in the appendix to the field medical regulations.

Tents, &c.

The tents carried with the field medical units are operation tents, a small tent for 10 men, and tortoise tents. The operation tents form part of the equipment of divisional

* Six days' reserve of food supplies is also carried, bringing the total of wagons up to 90 general service wagons or 187 country carts.

medical units, two being carried with the reserve material section. None of the other medical units are supplied with tents, but one operation tent is kept in the reserve material department of each "corps unit" of the advanced depot of medical stores. The tent is a rectangular tent with high side pieces, and one window on each side. It has two end poles and a ridge pole, and 14 side poles (7 on each side).

The small tent for ten men forms part of the equipment of the cavalry divisional medical unit and of infantry divisional medical units and field hospitals with mountain equipment.

The cavalry unit has 2 such tents, carried on one of the ambulance wagons. A dressing station section of an infantry divisional medical unit with mountain equipment has four; a half section of a field hospital with mountain equipment has ten of these tents. One pack animal carries two tents. This tent is shaped like an Indian pâl and covers a ground space of about 100 square feet.

The tortoise tent is carried on the *fourgon* of the Teutonic Order's column attached to the infantry divisional medical unit. The design of this tent is such that on either side of the wagon a covered shelter, open in front, can be formed large enough to hold an operating table and allow space for the medical officers and their assistants.

Improvised shelter is formed by lacing together the *tentes abri* of patients and of the medical corps personnel. The latter is trained in methods of erecting shelter in this way.

Special Equipment.

A Roentgen Ray field wagon is officially recognized. It is similar to the wagon adopted by the German Army, but with some slight modifications. The technical fittings are manufactured by the same firm, Siemens and Halske. It is a four-horsed wagon, and is intended to be kept with the reserve medical units for use in the field as required. One wagon is to be supplied to each army; but at present only one wagon has been manufactured. The cost of each wagon complete is about £750.

The Sanitary Committee's (*Salubritäts-Kommission*) equipment is carried in two chemical analysis cases and two bacteriological analysis cases; the microscope being carried

in one of the latter. The equipment is kept in peace time with the Technical Medical Committee; in war it is loaded on country carts and moves with the transport of the head-quarter staff of the army lines of communication. Material required for disinfection is obtained by purchase or requisition as required. Each of the chemical analysis cases measures $35'' \times 17'' \times 13''$ and weighs about 80lbs. when full. The bacteriological cases differ in size and weight, one measuring $24'' \times 17'' \times 15''$ and weighing about 80lbs., the other measuring $33'' \times 24'' \times 15''$ and weighing about 124lbs.

CHAPTER IV.

THE ORGANIZATION AND RESOURCES OF VOLUNTARY AID.

GENERAL ORGANIZATION.

The voluntary organizations in Austria-Hungary which are recognized officially as auxiliaries to the army medical service are the Teutonic and the Sovereign Maltese Orders of Knighthood, the Austrian Red Cross Society and the Hungarian Red Cross Society. Their rôle in war is regulated officially; the organization and duties of each form an appendix to the field medical regulations.

The manner in which this voluntary aid has become a means of supplying essential parts of the equipment and transport of the army medical service has already been noted

CONTROL IN TIME OF WAR.

In peace time the work of the Orders of Knighthood and of the Red Cross Societies is carried on independently of one another but under the advice and supervision of representatives of the War Office and of the military medical authorities, so far as their preparations for war are concerned. In war they come under the direct control of an Inspector-General of voluntary aid, who has two commissioners, one for each of the two monarchies, and a number of delegates under him. The Inspector-General is appointed on mobilization only and for the duration of the campaign. He maintains touch with the War Office on the one hand, and on the other with the delegates of the voluntary aid societies and of the Orders of Knighthood, who are attached to the army and to the principal medical officers of army lines of communication, army corps,

and divisions operating independently. His chief duty is to keep himself acquainted with the place, time and manner in which voluntary aid is required to supplement the regular medical service, and to inform the central committee of the requirements. In emergencies he communicates direct with local societies or individuals and helps them in bringing the desired assistance to the spot where it is wanted. His place is with the field army or lines of communication. He has a personal staff for the business of his office, and under him are chief delegates, attached to the staff of the principal medical officer of the army lines of communication, and a number of other delegates and individuals, whom he can distribute wherever he may think necessary inside or outside the area of operations.

The two commissioners of voluntary aid are also appointed only on mobilization. They are as a rule the presidents of the central committees of the Austrian and Hungarian Red Cross Societies. Their place is in the home territory. They assist the Inspector-General

- (1) by keeping voluntary aid societies within their part of the monarchy informed as to the specific work which they will be required to undertake from time to time and rules under which they may help in the care of sick and wounded;—
- (2) by co-ordinating the work of societies and individuals and preventing friction in carrying out work which has a common object in view;
- (3) by informing societies how they are to meet the requisitions of the Inspector-General and to what places, depots, etc., gifts are to be sent for the field army or fixed medical establishments;
- (4) by maintaining a nominal roll of individuals, who would be suitable for appointments as voluntary aid delegates.

The commissioners will also give notice to all societies and individuals engaged in voluntary aid to apply to them on mobilization for information with regard to any work which they may desire to undertake or gifts which they may wish to offer.

They will inform their central committees regarding the extent to which the preparations made in peace for establishing Red Cross Society's hospitals, convalescent homes, rest

stations, etc., will be required or how far they will have to be expanded. They will also be responsible for supervising all the voluntary aid hospitals and convalescent depots in the home territory, although the control of these as regards technical medical duties and discipline will come under the regular army medical service or other official medical services.

All officials, both civil and military, are obliged to help the commissioners in every possible way in carrying out their duties.

The voluntary aid delegates are the direct agents of the Inspector-General of voluntary aid in the field. Their names are kept on a list of appointments, made in peace on the proposal of the presidents of the Red Cross committees of Austria and Hungary by the Sovereign's representative on these committees. On mobilization they are assigned to different duties by the Inspector-General of voluntary aid, who issues to them the necessary certificates of identity together with the Red Cross brassard. The certificates and brassards are also issued by the Inspector-General to all other individuals employed by voluntary aid societies in the area of operations.

The delegates are of two classes, namely, chief delegates (*Hauptdelegirte*) and delegates (*Delegirte*). The former, as already noted, are attached to the staff of the principal medical officer of the lines of communication of each army. They have a personal staff of ordinary delegates, whom they can send wherever it may be thought necessary. Chief delegates have the right of disposing of all voluntary aid individuals employed with army corps, divisions or lines of communication, as well as of the mobile voluntary aid depot of medical stores, irrespective of the country or society to which they belong. The delegates are obliged to carry out the instructions of the Inspector-General, or chief delegate with the army, but may report to the central committee on all matters which they may think fit to report upon, through their chief delegate or through the commandant of the field medical unit to which they may be attached. In addition to the delegates with the field army, delegates of voluntary aid societies are also appointed to all the large medical establishments in the home territory and are in direct communication with the central committee. Delegates are thus the agents of the central committee for expenditure of voluntary supplies either in money or material, and are responsible to the committee for the manner in which this is done.

THE TEUTONIC ORDER OF KNIGHTHOOD.

This Order, called "*Der deutsche Ritterorden*" in Austria-Hungary, provides certain field units, namely: field medical columns (*Feldsanitätskolonnen*) and hospitals for wounded (*Verwundetenspitäler*). The Order also possesses permanent hospitals, in which hospital personnel is trained in peace and which are available for military patients in war.

Field Medical Columns.

These have already been described in connexion with the divisional medical units, of which they form an integral part. They are given the same number as the medical unit to which they belong. Thus "*Deutsch-Ordens-Feld-Sanitäts Kolonne Nr. 10*" means the column attached to No. 10 Infantry Divisional Medical Unit. The column is under the command of the commandant of the divisional medical unit and consists of a *fourgon* with material and 4 ambulance wagons, which can be utilized as the commandant thinks fit. No personnel of the Order goes with the column; but the wagons, material of every kind, harness for the horses, and clothing of the drivers are provided and maintained in peace mobilization stores at the expense of the Order.

1 N.C.O. and 12 men of the army medical corps, and 1 N.C.O., 8 men and 14 horses of the transport corps, (in the case of mountain equipment 10 men and 18 horses), are provided by the military authorities. Provision for this personnel is made in the war establishments of the field medical detachment and transport squadrons which are assigned on mobilization to the divisional medical units. The Order maintains 46 of these columns complete in military mobilization stores, partly in the garrison hospitals, partly in the train depots, 2 being equipped with material for transport on pack animals in mountainous country. The wagons of the column have the Geneva cross painted on the fore part of the side in the upper corner; the cross known as the Marianer Cross, which is the badge of the order, is painted on the side of the driver's seat. The personnel wear a Marianer Cross brassard below the Red Cross brassard and attached to it. Each column mobilizes with the divisional medical unit to which it belongs.

A special delegate is appointed by the Order to each army corps headquarters. His chief duty is to watch and replenish when required the material of the field medical columns. He is appointed under the same conditions as other voluntary aid delegates, and receives field rations, transport, grooms, etc., at the public expense.

Hospitals for Wounded.

The hospitals for wounded, the material and transport of which are provided by the Order, are four in number. They are designated "*Deutsch-Ordens Spital für Verwundete*, (Nr. I, II, III or IV)." The material for transport and equipment generally of these hospitals are kept in one of the huts at the Red Cross Society's depot in Vienna. Each hospital is organized for the reception of 200 seriously wounded.

These field hospitals are employed in the same position in the field as the regular field hospitals, and they are, as a rule, kept ready to proceed earliest to the relief of the ambulances. It is intended that they should take over and treat on or near the battlefield the most severe cases of wounds, such as are not fit for transport. Each hospital has a wounded transport column, similar to the Red Cross wounded transport column of the regular field hospitals, attached to and forming an integral part of it. The commandant of a *Deutsch-Ordens Spital für Verwundete* is a knight or member of the Order, who at the same time has been an officer in the army and is entitled to wear the uniform of an officer. He is appointed with the approval of the War Office. The remainder of the personnel is partly supplied by the Order, partly by the military authorities. The Order, for example, provides a delegate to assist in administration, a commandant of the wounded transport column, 5 doctors, an apothecary, a chaplain, 15 nursing sisters of the Order, and 3 servants. The military authorities provide a paymaster and a field medical detachment of 11 N.C.O.'s and 88 men of the medical corps, of whom 1 N.C.O. and 21 men are for the wounded transport column. They also provide 1 conductor, 75 drivers, 1 riding horse, and 150 draught horses. The transport material, namely, 16 field hospital stores wagons, 2 *fourgons*, and 36 ambulance wagons, and all hospital equipment, medical and surgical stores, clothing for the military as well as for its own personnel, harness, etc., are

provided by the Order. The doctors, nursing sisters and other officials are conveyed in 6 of the ambulance wagons, the object being to have a hospital, suitable for taking over the very severe cases on or near the battlefield, as mobile as possible.

Civil Hospitals.

The hospitals maintained in peace by the Teutonic Order are civil hospitals at Langendorf, Braunsefen, Troppau, Freudenthal, Friesach, Würbenthal and Friedau on the Drave. They will be used as military hospitals in war. They are comparatively small hospitals, but a considerable number of out-patients receive treatment at them; and the nursing sisters, who form part of the personnel of the field hospitals of the Order, are trained in them.

Resources.

The income and property of the Order represent a comparatively large sum of money. The buildings and equipment of the hospitals at Friesach, Würbenthal, Freudenthal and Friedau belong to it, but only the equipment of the hospital at Troppau. The Order also owns the hospital buildings at Lengmoos and maintains large depot buildings at Agram, Cracow, Lemberg, Temesvár and Vienna for the transport material of its field medical columns. The 46 field medical columns and 4 hospitals for wounded, which it holds ready for immediate mobilization, include 48 *fourgons* of dressings and medical comforts, 190 ambulance wagons, 1,246 field stretchers, 820 panniers, 48 field kitchens, 48 operation tents, 1,600 blankets, 3,200 sheets, 800 mattress and pillow cases, and the complete clothing and equipment of 1,338 soldiers of the medical corps and transport corps, with the saddlery, harness and equipment of 48 riding and 984 draught horses. This material is kept in military stores, except in the places mentioned above, where the Order has its own depots.

THE SOVEREIGN MALTESE ORDER OF KNIGHTHOOD.

The Maltese Order is the Sovereign *Malteser Ritter-Orden*, *Grosspriorat von Böhmen*, and owns large estates in Bohemia, from which its revenues are derived.

In time of war it undertakes to supplement the Army Medical Service on the line of railway. For this purpose it maintains six specially constructed and equipped hospital trains, and is prepared, on mobilization, to provide six more. Each train is composed of 16 cars—namely, 10 cars for 10 lying-down patients each, 1 for the commandant and medical officers, 1 for kitchen, 1 for provisions, 1 for stores, 1 dining car and 1 clothing and equipment car. The personnel is provided by the Order and consists of 1 commandant, 1 paymaster, 2 medical officers, 10 ward attendants and 2 cooks. The six hospital trains thus consist of 96 cars, with a personnel of 12 officials, 12 medical officers, 60 attendants and 12 cooks, and are capable of carrying 600 serious cases. The Order undertakes all the expenses of providing, maintaining and equipping the trains, and of clothing and paying the personnel, with the exception of the pay of the medical officers, which is refunded to the Order by the War Office. The military authorities also supply rations for the personnel and for the patients. The locomotives and guards' vans are provided by the railway companies over whose lines the trains are running.

The Order has a mobilization depot in Strakonitz, Bohemia, where all the equipment necessary for the hospital trains is stored, except articles which can generally be purchased at any time, and which would deteriorate in store. Such articles and the clothing for the personnel are guaranteed by contracts made in time of peace. An annual report is submitted to the War Office, showing the exact state of the equipment kept by the Order for the hospital trains.

A complete train is kept for purposes of training and instruction (*Schulzug*), and all personnel go through a course of training on it yearly, under the direction of the senior medical officer. The personnel, it may be noted, are, as a rule, employés on the estates of the Order and are thus under its control.

On the outbreak of war the trains with personnel and equipment assemble at places determined by the War Office. Their movements are then directed by orders from the War Office.

All six trains are under the charge of the senior medical officer of the Order (*Ordens-Chef-Arzt*) as regards supervision, inspection and interior management. The commandant of each train supervises the personnel and is under the unconditional control of the military railway authorities as regards the running of the train.

The medical officers of each train are examined and tested in peace time by the senior medical officer of the Order as to their suitability for employment. Under certain circumstances their work may be supervised and inspected in war by the principal medical officers of armies or of army lines of communication; or by any senior military medical officer appointed by the War Office.

The personnel wear a special uniform of the Order; below the Red Cross brassard and attached to it they wear a red brassard with a white Maltese Cross, and they also wear a Maltese Cross badge on their caps. The commandant and paymaster of a train have, in addition, a Maltese Cross on the breast of their tunic:

The cars of the hospital trains are distinguished by painting on the sides the description of car (*e.g.* "*Ambulanz-Wagon*," "*Küchen-Wagon*," etc.), the number of the car and the Red Cross and Maltese Cross.

The obligations of the Order to the State are such that, under its present constitution, it cannot refuse either wholly or in part to refrain from supplying this supplementary aid in war.

Although the provision of hospital trains is the chief work of the Maltese Order in war, the Order shares in the work of conveying sick and wounded from the railway station in Vienna to the hospitals in that city. For this purpose it maintains in the Transport Depot at Klosterneuburg 12 ambulance wagons and 2 kitchen wagons, which form the transport material of a transport column, consisting of a knight of the Order (in command), a paymaster and 48 stretcher bearers with 48 stretchers. The column can carry in each ambulance wagon 4 lying and 2 sitting, or 8 sitting, so that in one journey 48 lying and 24 sitting, or 96 sitting can be carried.

THE AUSTRIAN RED CROSS SOCIETY.

The Austrian Red Cross Society is a union of various voluntary aid societies, which originated at different times and places, sometimes with different objects, in the kingdoms, provinces and cities of Austria. During the war of 1859 a national aid society was formed in Vienna. It remained in

existence during the war and was resuscitated in 1864, when it was again dissolved to become active once more in 1866. The funds remaining at the end of this war were devoted to assist the men incapacitated from wounds and the widows and orphans of soldiers. Eventually the Emperor decided that the funds should be used also in preparing for relief of wounded in war. Other societies then came into being, and in 1879 they were united into one National Red Cross Society.

The Austrian Red Cross Society is now composed of a Central Committee in Vienna, nine provincial national aid societies with membership of both sexes, seven similar societies with male members only and six with women members only, or 22 national aid societies in all.

Conjoint male and female societies are the Austrian National Aid Society of Vienna or Lower Austria, which is the oldest of the voluntary aid societies, and the conjoint voluntary aid societies (*gemeinsame Landes-Hilfsvereine*) of Bukowina, Galicia, Carinthia, Carniola, Moravia, Silesia, Steiermark and the Tyrol. The male provincial societies are the *Landes-Hilfsvereine* of Bohemia, Dalmatia, Görz and Gradiska, Upper Austria, Salzburg, Trieste and Istria, and Vorarlberg. The women's provincial societies are the *Frauen-Landes-Hilfsvereine* of the same kingdoms and provinces with the exception of Vorarlberg, which has only a male society.

These societies act as *Stammvereine* or parent societies, and have as many as 437 branch societies affiliated to them. In Galicia there are 80 district offices (*Bezirks-bureaux*), which act as branch societies. These branch societies enrol members and collect subscriptions, the total amount of which in the case of the district offices of Galicia goes to the parent society.

Membership is composed of ordinary members, who pay a regular subscription, supernumerary members, who give a donation only, and honorary members.

The number of ordinary members of the Austrian Red Cross Society according to the last report (for 1907), was 52,577; including honorary and supernumerary members the total number of members was 57,919. The income from annual subscriptions, legacies, &c. amounted approximately to £38,000, the expenditure of which is divided into the cost of administration, work of the societies in peace, *i.e.* in connexion with accidents and national calamities, expenditure in preparations for war, in support of military charities and in

other fields of activity, such as the publication of a Red Cross Journal. More than one half of the expenditure is in connexion with preparations for war. The value of property, including medical and surgical material, ambulance wagons and other transport material was approximately £66,000.

These parent societies are managed by committees of 10 or 20 members, elected at a general meeting of ordinary members for three years. In order to help the societies in connexion with their preparation for supplementing the army medical service in war, representatives of the local military and national defence authorities are officially appointed to each provincial committee. The committees elect their own president and a first and second vice-president.

The central control and direction of the union of voluntary aid societies in Austria are in the hands of a general assembly, office bearers of the union and a central committee. The general office work is carried out in the office of the Austrian National Aid Society of Vienna.

The general assembly (*Bundesversammlung*) is composed of delegates from the committees of the various voluntary aid parent societies in the kingdoms and provinces of the Empire, and 37 elected members of the Austrian National Aid Society of Vienna. The number of delegates from each parent society varies from 1 to 3, the total number being 64. There are thus, with the 37 elected members of the Vienna Society, 101 members of the general assembly. Delegates and members are elected for three years.

The office bearers are a president, elected by the general assembly, two vice-presidents, the first elected by the delegates of the provincial parent societies and the second by the Vienna Society. The delegates of the Women's Voluntary Aid Societies elect a first and second lady vice-president. These elections must be approved by the Emperor.*

The Central Committee (*Bundesausschuss*) is composed of six of the delegates of the provincial societies, six of the delegates of the women's societies and six of the elected members of the Vienna Society. They are elected by these three different groups at the general assembly. Three waiting members are elected in each group as a reserve. They must reside in Vienna.

* The lady vice-presidents were approved by the Empress during her lifetime.

Both the general assembly and the central committee are in close touch with the Government. Representatives of the Imperial War Office and of the Ministry of National Defence are appointed officially to advise with regard to the military requirements and to help the voluntary aid societies generally to carry out the tasks assigned to them. The representatives of the Imperial War Office are a staff officer of field or general rank, the senior officer of the army medical officers' corps or his deputy, and the director of the 14th section (army medical department) at the War Office or his deputy. The representatives of the Ministry of National Defence are an officer of field rank and the head of the medical department of the Landwehr or his deputy.

The work of the Austrian Red Cross Society in connexion with the requirements of the army medical service in war covers a wide extent of ground. In the last published report the following items are enumerated:—

- (1) General preparations.
- (2) Wounded transport columns.
- (3) Mobile field depots.
- (4) Field hospitals.
- (5) Provision of field delegates, medical officers, accountants, pharmacists, etc.
- (6) Provision of supplementary personnel, and the clothing, equipment and training of personnel provided from the army reserves.
- (7) Provision of depots for vehicles in Vienna and in provincial towns.
- (8) Provision of equipment for mountain warfare.
- (9) Provision of first field dressings and "type" dressings.
- (10) Publication of service instructions.
- (11) Central information bureau.
- (12) Austrian information bureau.
- (13) Reserve and auxiliary hospitals.
- (14) Hospital ships.
- (15) Provision of medical comforts and hospital diets.
- (16) Rest stations.
- (17) Organization of nursing in private houses.
- (18) Personnel for voluntary work in the home territory.
- (19) Arrangements for transport of patients.
- (20) Courses of instructions for voluntary aid personnel.

Much of this work has been referred to in the previous chapter. As regards the general preparations for war, the Red Cross Society directs its efforts towards the removal of friction among the various parent societies, of which it is the union, and towards general inspection of the work done by each.

Wounded transport columns (Blessiertentransportkolonnen).

The wounded transport columns number 33; as already noted, they form an integral part of the field hospitals of the regular service and are used for the transport of sick and wounded from the divisional medical units and field hospitals to the mobile reserve hospitals or evacuating stations on the line of railway. They may also be used after a battle in connexion with the clearing of the battle field. Each column consists of a delegate of the Red Cross Society, 22 subordinate personnel of the Landwehr provided by the War Office, 15 two-horsed ambulance wagons and one 4-horsed *fourgon*.

The total number of wagons maintained by the society for wounded transport columns is 648. In addition, there are 99 wheeled litters distributed amongst the societies for aid in connexion with accidents in peace.

Mobile field depots (Mobiles Vereinsdepot).

Each army in the field has a mobile depot supplied by the Red Cross Society, and forms as a rule a section of the advanced depot of medical stores. Its object is to supplement the official material supplied to field medical units and to enable the material to be obtained as quickly as possible. The material kept ready in the depot is arranged in units; thus there is material for a divisional medical unit in two large *fourgons* (*Deckelwagen*), and for a field hospital in 29 large cases and 2 packages. In addition, the mobile field depots replenish the four field hospitals of the Teutonic Order, and voluntary gifts received by the provincial and women's societies are distributed to the field units through these mobile depots of the Red Cross. The personnel of a mobile depot consists of a Red Cross delegate as commandant and a subordinate personnel supplied by the War Office from the Landwehr in proportion to the number of field medical units and army corps of which the army is composed. The horses are also provided by the War Office, and any country carts, which may be required, by the lines of communication staff.

Field hospitals of the Red Cross.

The Red Cross Society keeps ready two field hospitals of 200 beds each, organized identically with the sections of the field hospitals of the regular medical service. Each has its own wounded transport column of five ambulance wagons. The personnel consists of 3 medical officers, 1 delegate, 1 accountant, 1 pharmacist and 65 subordinate personnel, provided from the Landwehr. The transport material consists of 1 wagon for medical officers and 1 for other personnel, 7 field hospital stores wagons, 1 *fourgon* and the 5 ambulance wagons referred to above.

Transport columns for mountain warfare.

Six columns are organized to supplement those of the regular army. Each consists of 4 *Gebirgskraxen*, or seats for carrying wounded on a bearer's back, 6 sledges, 1 pair of panniers filled with medical and surgical material and comforts for carriage on a pack animal, and 10 field stretchers with telescopic handles. The personnel and pack animals are provided by the War Office, the former from the Landwehr.

Delegates, medical officers and higher officials.

The delegates of the Red Cross Society in the field must be men who hold the rank of officers in the army, with the exception of those attached to the office of the inspector-general of voluntary aid and the secretaries of chief delegates, who may be civilians. Delegates employed in the home territory at the Central Office, in the information bureau and depot for material, and those employed in fortresses, rest stations, with the committees for distribution of sick and wounded and with the staffs of military territorial districts, may also be civilians. The total number of delegates and officials on the roll of the Society is 94, of whom 87 are officers, 2 are military officials and 5 are civilians. They are distributed as follows:—

2 delegates on the staff of the Inspector-General of voluntary aid;

3 on the staff of the Austrian Imperial Commissioner of voluntary aid;

- 2 chief delegates;
- 52 delegates with the field army;
- 30 delegates for Red Cross establishments in the home territory;
- 5 employed in the Central Office in Vienna.

The number of medical officers for field and home establishments on the Red Cross Society's list is 161; and there are also 7 accountants and 9 pharmacists.

Subordinate personnel.

This personnel is supplied from the Landwehr, with the exception of 49 men of the Landsturm, employed in the information bureau, and 36 of the naval reserve, employed in hospital ships. The total number required for the various field and home establishments is 3,792 non-commissioned officers and men; they are provided with clothing and equipment at the expense of the Red Cross Society. The material is kept ready in mobilization stores of the society, and articles which deteriorate are turned over to the military authorities after periodical inspection and replaced by them.

Red Cross Society's Depots.

In the Prater at Vienna and in other large garrison towns the Red Cross Society owns and maintains large huts or warehouses, where the transport and other material are kept in time of peace. Those in the Prater are six in number. They are solidly built and well lighted brick huts, measuring about 200 feet in length and 70 in width. On mobilization these huts would be empty, and they are then available as depots for receiving and storing medical and surgical material, comforts and gifts for distribution to the field depôts, under the instructions of the Imperial Commissioner. Patterns of the material required by the military authorities are kept at these depots, and instructions regarding their preparation by the civil inhabitants are issued on the outbreak of war.

All the material in the depots is subject to inspection by the military authorities.

Surgical Dressings.

As already noted, the Red Cross Society provides the funds for supplying a large number of the first field dressings, and also the "type" dressings used in the field. The dressings are prepared in the central laboratory of the army medical service, and supplied at less than one quarter of the cost charged to the society by private firms. A turnover of the dressings is maintained by supplying them to military hospitals and renewing the expenditure yearly. The cost of 700,000 first field dressings was thus noted amongst the estimates of the Society for 1909.*

Service Instructions and other Publications.

Instructions are published for regulating the work of the Red Cross Society's field hospitals and wounded transport columns, for the organization and working of the central information bureau, for the arrangement and management of rest stations, and for other work of the Society.

Amongst other publications, the Austrian Red Cross Society publishes a monthly journal, "*Das Rote Kreuz*" †; in it all the official transactions and notices of the Central Committee are recorded.

Information Bureaux.

One of the most complete and efficient organizations of the Austrian Red Cross Society is that of a central information bureau, ‡ which collects lists of the sick and wounded from all the medical units and establishments in the area of operations and elsewhere, sorts and classifies them, makes card indices of each individual, and transmits the necessary information to subordinate bureaux, one in Vienna for Austria, and one in Budapest for Hungary. The subordinate bureaux inform relatives and answer enquiries from them.

* In the estimates for 1909 provision is made for the supply of two Roentgen ray field wagons to the field medical equipment of the Army, at a cost of about £700 each.

† "*Das Rote Kreuz*" has been published for twenty five years by the Bureau of the Austrian Red Cross Society, 1, Milchgasse, Vienna.

‡ The details of the constitution and working of the central information bureau are given in Appendix III; this feature of Red Cross organization in Austria is selected as of special value and instruction, just as the details of the organization of "*Infirmières de Gare*," which are specially instructive in connexion with the French "*Société de Secours aux blessés*," are given in the Appendix of Part I of this Handbook.

Reserve and Auxiliary Hospitals.

The parent societies and affiliated societies throughout the Empire have prepared detailed plans of buildings, and schedules of equipment for converting monasteries, public buildings, empty barracks, and similar institutions into hospitals for sick and wounded during war. The details of each are printed, checked and revised from time to time; they include mobilization tables, showing exactly the work which has to be done each hour and each day of mobilization until the hospital is ready to receive patients.

Several of these reserve hospitals are provided by the clerical communities, others by municipal corporations, special societies or private individuals; the majority are organized by the Red Cross Societies. The clerical communities are prepared to mobilize reserve hospitals for 50 officers and 480 men, with auxiliary hospitals in Moravia and Bohemia for 20 officers and 892 men; corporations, societies and individuals mobilize reserve hospitals for 5 officers and 819 men, with auxiliary hospitals for 15 officers and 110 men; the Red Cross societies have reserve hospitals for 155 officers and 7,277 men.

In addition to these, arrangements are made by the Red Cross Society for utilizing beds in some of the civil hospitals and for establishing convalescent homes. Thus, accommodation is arranged for 225 officers and 2,436 men in civil hospitals; and for 30 officers and 1,910 men in convalescent homes.

The total number of hospital or convalescent beds organized by voluntary aid in the home territory for sick and wounded in war is consequently 500 for officers and 13,924 for men. The arrangements are subject to inspection in time of peace by the local military authorities; in war they come under the control of the Austrian Imperial Commissioner for voluntary aid.

Hospital Ships.

Plans are prepared for mobilizing one hospital ship at Trieste in time of war. The naval transport authorities at Trieste have arranged to charter for the Women's National Aid Society there either the "Ettore" or the "Achille" steamships of the Austro-Hungarian Lloyd Company; the Society has most of the equipment in the mobilization stores of No. 9 garrison hospital at Trieste. A retired naval officer will command the ship and hospital personnel will be supplied by the

military authorities. The Society is not under obligation to take either of these steamers, should more suitable vessels be available, but the plans are based on adapting them for 100 sick or wounded. The Central Committee of the Red Cross Society also has funds for the preparation of a second hospital ship, the "Falkenhayn," which will be constructed with the aid of the Trieste Society.

Provision of Hospital Diets.

In most of the Austrian towns there are popular kitchens (*Volksküche*), for supplying food to the poor and also for preparing and distributing food in time of calamities. They are controlled and organized by municipal or benevolent societies, the most widely known being the First Popular Kitchen Society of Vienna (*Der erste Wiener-Volksküchenverein*). This society has made arrangements with the Red Cross Society to give instruction to the local voluntary aid societies in the provincial capitals throughout the Austrian Empire in the management and equipment of kitchens and preparation of diets, with a view to ensuring that the sick and wounded, received into hospitals improvised out of schools and other public buildings, will be properly fed. The courses of instruction will last for one to two weeks, and will include a demonstration of the large portable kitchens used by the *Wiener-Volksküchenverein* in connexion with public calamities. Considerable progress has already been made in this direction.

Rest Stations.

Two classes of rest station are organized by the Red Cross Society in Austria. Those without accommodation for the night are organized to open at railway stations, where trains conveying sick and wounded halt for a sufficiently long time to enable the patients to have a meal. These stations are called sometimes refreshment stations (*Labestationen*) or mid-day meal stations (*Mittagsverköstigungsstationen*); they provide refreshments such as coffee, tea, soup, wine and beer, and have a personnel of doctors, stretcher bearers and sick attendants to take charge of about 10 patients who may be unfit to continue the journey. The rest stations with accommodation for the night are larger establishments with arrangements for the accommodation and care of 210 to 212 sick or

wounded passing through. All the sitting up patients and those unfit to continue the journey must be removed from the trains and kept in the rest station overnight. Those lying-down may remain on the stretchers or cots in the railway cars.

The War Office determines on mobilization and from time to time where the Red Cross Society's rest stations are to be opened; the Imperial Commissioner issues the necessary instructions to the local branches.

The number of rest stations in 1907 was 51 with accommodation for 4,632 sick and wounded.

Nursing in Private Houses.

The Red Cross Society undertakes the control and organization of private offers of homes for officers and men, under the control of the military authorities of territorial districts. Accommodation for 3,136 officers and 11,107 men is provided for in this manner. Only convalescents and patients requiring merely rest and good food will be sent to these homes.

Personnel for Red Cross Establishments in the Home Territory.

Soldiers belonging to the Landwehr may be appointed to do duty in hospitals and other establishments organized by the Red Cross Society; but, in addition to these, lists are kept of medical men and others who are willing to help and who are not liable to military service. At present there are 326 doctors on the list and 12 pharmacist officers for reserve hospital dispensaries and laboratories; 178 chemists have also placed their shops at the disposal of the Society in war, 13 of them gratuitously.

Sick attendants and nurses are for the most part obtained from sisters of religious orders, or professional male and female nurses. The number of female nurses thus on the list for employment in war is 642 and of male nurses 129. The members of a society of nurses in Trieste to the number of 100 are also available at a day's notice, together with all their equipment and outfit, for employment in case of epidemics or on outbreak of war.

Local Transport of Sick.

Arrangements for the transport of sick and wounded from hospital trains or other trains to the hospitals, etc., in the home territory are organized through the voluntary fire brigade union, the military veterans' association, and in some towns, as, for example, in Prague, Trieste and Vienna, by voluntary first-aid societies. The number of local transport columns organized in 1907 for this purpose was 135 with a personnel of 1,670.

Courses of instruction for voluntary aid personnel.

The various voluntary aid societies arrange for the instruction, chiefly of female nurses, in local hospitals, dispensaries and accident stations. This work of the Red Cross Society is carried on gradually in time of peace, and the number of women, especially members of religious sisterhoods, who are devoting their time to acquiring knowledge of nursing work in hospitals, is increasing yearly.

In addition to all these schemes the Austrian Red Cross Society acts as a Soldiers and Sailors' Help or Families' Society for aiding invalids, the widows and orphans of men who are killed in battle, and the families of reservists of the Landwehr or Landsturm who may be embodied on mobilization.

THE HUNGARIAN RED CROSS SOCIETY.

This Society, which is entirely distinct from the Austrian Red Cross Society, is organized under the supervision and advice of the military authorities in the same way as the Austrian Society. It provides a wounded transport column (*sebesültszállító oszlop*) for each of the 11 field hospitals which will be mobilized in Hungary, the personnel being provided by the military authorities from the Hungarian Landwehr; but a special feature of the Hungarian Red Cross Society's wounded transport columns is the provision of equipment for carrying wounded in mountainous country. The Society has ready for mobilization 10 bearer columns equipped for mountain transport (*hegyi sebesültvő oszlop*).

One 200-bed field hospital (*egyleti tábori kórház*) and two mobile field medical depots (*mozgó egyleti raktár*) are also kept ready for mobilization by the Society.

In the home territory the Hungarian Red Cross Society undertakes the same kind of work as that already described under the Austrian Red Cross Society. The number of beds organized by it in reserve hospitals throughout Hungary is 2,000, in 8 hospitals.

At Budapest the Society possesses a large hospital, which is used for training male and female nurses, and which is occupied in peace by various classes of paying patients. This is the well-known "Elizabeth" hospital in Buda. It has accommodation for 120 and in time of war can be expanded to 800 beds by utilizing the masonry huts in its own grounds, which in time of peace are used as the store-rooms for the material of its transport columns, &c. Each hut is constructed so as to form two large wards with rooms for nurses and medical officers in the centre of the building.

The number of rest stations organized by the Hungarian Society is 23, with accommodation for 5,078 serious cases. There are also 27 refreshment stations; 283 auxiliary hospitals with accommodation for 186 officers and 9,462 of the less seriously sick or wounded men; 4 convalescent hospitals for 494 convalescents; and 704 convalescent homes for 553 officers and 26,770 men.

The Society undertakes the same duties as the Austrian Society in connexion with invalids, widows, orphans and families of soldiers.

Medical Personnel and Equipment of Regimental Units.

Unit.	Personnel.					Material.										
	Subordinate personnel from the unit.					For Stretcher Bearers.					For Carriers of Equipment.					
	Officers of the Medical Corps.	Medical Assistants.	Stretcher Bearers.	Medical and Surgical Equipment.	Stretchers.	Leg Splints.	Surgical Pouches.	Water Bottles.	Company Lanterns.	Dressings.	Knap-sack.	Requisites.	Knap-sack.	Supplementary Knap-sack.	Medical Pouches.	Dressings.
	Officers of the Medical Corps.	Medical Assistants.	Stretcher Bearers.	Medical and Surgical Equipment.	Stretchers.	Leg Splints.	Surgical Pouches.	Water Bottles.	Company Lanterns.	Dressings.	Knap-sack.	Requisites.	Knap-sack.	Supplementary Knap-sack.	Medical Pouches.	Dressings.
Infantry Regt. (3 battns.)	5	12	4*	6	24	24	48	48	12	3	3	6	6	6	6	12
" " (4 ")	7	16	64	8	32	32	64	64	16	4	4	8	8	8	8	16
Cavalry Regt. (6 squadrons)...	3	6	6	3	6	6	6	2	...	...	...	...	...	...	...	9
Artillery Regt. (4 batteries)...	2	4	...	2	8	8	16	16	1	1*	1*	2*	2*	2*	2*	4
H.A. division (3 batteries)	1	3	6	...	...	...	...	...	...	...	...	...	...	...	...	3
Divisional amm. park...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	4
Corps amm. park	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Army amm. park	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Mountain div. amm. park	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Train squadron of	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Army L. of C. staff	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Army staff	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Army Corps	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	200
Infantry division	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Cavalry division	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Bridging section	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	100
Field supply stores convoy...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	150
Corps transport park	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	200
Pioneer Company	...	...	4	...	2	2	4	4	1	...	...	...	...	...	...	100
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	150

* With Divisional Regiment only.

† With Army Corps Regiment only.

APPENDIX II.

A. *Order of March of an Infantry Divisional Medical Unit with Field Equipment:—*

Surgeon-major in command...	...	...	} 12 paces.
Captain of Medical Corps	...	...	
Sergeant-major of Transport Corps...	...	...	
Aid-post wagon echelon (9 two-horsed wagons)	...	...	126 paces.
Lightly Wounded Section.			
2 surgeons-captain or lieutenant	...	...	} 54 paces.
2 four-horsed field hospital stores wagons	...	...	
Detachment Medical Corps	...	...	
Dressing Station Section.			
1 surgeon-captain or lieutenant	...	...	} 156 paces.
1 section leader, transport corps	...	...	
1 four-horsed F.H. stores wagon	...	...	
2 two-horsed equipment wagons	...	...	
1 four-horsed F.H. stores wagon	...	...	
2 two-horsed equipment wagons	...	...	
4 reserve draught horses	...	...	
2nd charger of surgeon-major	...	...	} 10 paces.
Detachment Medical Corps	...	...	
Ambulance Section.			
2 surgeons-captain or lieutenant	...	...	} 54 paces.
2 four-horsed F.H. stores wagons	...	...	
Detachment Medical Corps	...	...	
	Space of	...	10 paces.
Ambulance Wagon Echelon.			
1 section leader of transport	...	...	} 224 paces.
6 four-horsed ambulance wagons	...	...	
1 corporal of transport...	...	...	
5 four-horsed ambulance wagons	...	...	
Teutonic Orders' Column.			
1 corporal of transport	...	...	} 116 paces.
4 four-horsed ambulance wagons	...	...	
1 four-horsed fourgon...	...	...	
2 reserve draught horses	...	...	

Reserve of Material Section.

1 corporal of transport	...	...	...	} 44 paces.
2 four-horsed F.H. stores wagons	...	...	...	
Lieutenant of Medical Corps	...	...	...	
Total length of column	...	...	...	796 paces.

B. *Order of March of an Infantry Divisional Medical Unit with Mountain Equipment :—*

Surgeon-major in command	...	...	...	} 24 paces.
Captain of Medical Corps	...	...	...	
Surgeon-captain or lieutenant	...	...	...	
Surgeon-captain or lieutenant	...	...	...	
Surgeon-captain or lieutenant	...	...	...	
Lieutenant of Medical Corps	...	...	...	

Dressing Station Section.

1 quarter detachment medical corps	...	...	...	} 30 paces.
1 quarter detachment medical corps	...	...	...	
1 quarter detachment medical corps	...	...	...	
1 quarter detachment medical corps	...	...	...	
Space	...	...	...	3 paces.
1 section leader of transport	...	...	...	} 20 paces.
5 pack animals	...	...	...	
1 corporal of transport	...	...	...	} 20 paces.
5 pack animals	...	...	...	
1 corporal of transport	...	...	...	} 20 paces.
5 pack animals	...	...	...	
5 pack animals	...	...	...	} 20 paces.
1 corporal of transport	...	...	...	

Ambulance Section.

Surgeon-captain or lieutenant	...	...	...	} 12 paces.
Surgeon-captain or lieutenant	...	...	...	
Lieutenant of Medical Corps	...	...	...	
Medical Corps detachment	...	...	...	12 paces.
Section leader of transport	...	...	...	} 36 paces.
9 pack animals	...	...	...	
Corporal of transport	...	...	...	} 36 paces.
9 pack animals	...	...	...	

Reserve of Material Section.

Lieutenant of Medical Corps	...	...	4 paces.
Pharmacist official	...	...	} 5 paces.
Detachment Medical Corps...	...	...	
	Space	...	3 paces.
Section leader of transport	...	...	} 12 paces.
3 pack animals	...	...	
3 pack animals	...	...	12 paces.
Corporal of transport	...	...	} 12 paces.
3 pack animals	...	...	
3 pack animals	...	...	12 paces.
	Space	...	10 paces.
Lieutenant of transport Corps	...	...	

Supply and baggage.

Sergeant-major of transport	...	...	} 184 paces.
24 pack animals for D.S. section	...	...	
14 pack animals for ambulance section	...	...	
8 pack animals for reserve of material	...	...	
Corporal of Transport	...	...	
	Space	...	3 paces.

Reserve of pack animals.

Field forge and tools.	...	...	...	} 80 paces.
4 pack animals	...	...	...	
Transport material	...	...	...	
4 pack animals	...	...	...	
Reserves	...	...	...	
4 with pack saddles	...	...	...	
8 without pack saddles	...	...	...	
Corporal of transport	...	...	...	

Total length of pack animal column	...	620 paces.
Ambulance wagon echelon	...	224 paces.
Teutonic Order's column	...	142 paces.
Mountain wounded transport column	...	40 paces.

Total length ... 1026 paces.

C. Order of March of a Field Hospital with Field Equipment :—

No. 1 Section.

Surgeon-major in command	...	...	} 288 paces.
Surgeon-captain or lieutenant	...	...	
Lieutenant of Medical Corps	...	...	
Conductor of transport	...	...	
8 4-horsed field hospital stores wagons	...	...	
2-horsed equipment wagon	...	...	
2-horsed auxiliary wagon	...	...	
4-horsed fourgon	...	...	
2 two-horsed personnel wagon for dis-mounted officers	...	...	
2 reserve horses	...	...	} 10 paces.
Detachment medical corps	...	...	
	Space	...	

No. 2 Section.

Surgeon-captain	...	...	...	} 270 paces.
Lieutenant of Medical Corps	...	...	...	
Conductor and wagons as in No. 1 Section, but with only one personnel wagon	...	...	...	
	Space	...	10 paces.	

No. 3 Section.

As No. 2 section	...	...	...	270 paces.
	Space	...	10 paces.	

Wounded transport column of the Red Cross.

Delegate, Red Cross Society	...	...	} 248 paces.
15 two-horsed ambulance wagons	...	...	
1 four-horsed fourgon	...	...	
2 reserve horses	...	...	
1 detachment medical corps	...	...	
	Space	...	10 paces.

Supply column.

Conductor of transport	...	...	...	} 228 paces.
16 two-horsed supply wagons	...	...	...	
Total length of column	...	...	1344 paces.	

NOTE.—When the sections march independently a third of the wounded transport column and of the supply column marches behind each section.

D. Order of March of Half Section of a Field Hospital with Mountain Equipment :—

Surgeon-captain	...	...	...	...	} 20 paces.
Lieutenant of Medical Corps	...	...	...	...	
Chaplain	...	...	...	...	
Surgeon-captain or lieutenant	...	...	...	...	
Pharmacist official	...	...	...	...	
Detachment Medical Corps	...	...	...	...	32 paces.
			Space	...	3 paces.
Section leader of transport	...	...	...	...	} 160 paces.
40 pack animals with medical and surgical equipment and rations	...	...	...	...	
Corporal of transport	...	...	...	...	
Subaltern officer of transport	...	...	...	...	
Paymaster	...	...	...	...	} 10 paces.
13 pack animals with supplies and baggage	...	...	...	...	
2 pack animals for field forge	...	...	...	...	} 32 paces.
2 pack animals for transport material	...	...	...	...	
2 reserve animals with saddles	...	...	...	...	
2 reserve animals without saddles	...	...	...	...	
			Space	...	10 paces.
Mountain wounded transport column.					
Detachment medical corps	...	...	...	...	} 40 paces.
2 two-horsed wagons	...	...	...	...	
Total length of column				...	359 paces.

APPENDIX III.

THE CENTRAL INFORMATION BUREAU OF THE AUSTRIAN
AND HUNGARIAN RED CROSS SOCIETIES.

I.—STATUTE OF ORGANIZATION.

Introduction.

(1) In virtue of the agreements arrived at at the second meeting of the Austrian and Hungarian Delegations on 16th March, 1883, a Central Information Bureau will be established for both nations.

Object.

(2.) The object of the Central Information Bureau, as laid down in Article V, Paragraph 5 of the principles to be followed, is:—

“The communication of information to relatives regarding the whereabouts, and the nature of the wound or disease, of wounded and sick soldiers of their own or allied armies.”

Preparation in Peace.

(3.) Preparations for the immediate working of the Central Information Bureau in the event of mobilization will be made by the Vice-Patron of the Red Cross Society in time of peace.

Organization in the event of War.

(4.) The Central Information Bureau will work in the event of war under the direct command of the Inspector General of Voluntary Aid.

The Bureau will be under the direction of a President of the Bureau, who will have a Vice-President associated with him.

For the work of the Bureau there will be a Secretary and the required number of Assistants and Servants.

The persons who will officiate in time of war as President, Vice-President, and Secretary, will be nominated in time of peace by the Vice-Patron (with the concurrence of the

Presidents of the Austrian and Hungarian Red Cross Societies), in order that they may keep themselves instructed in the conduct of the office. The remaining personnel may be appointed as required by the War Office from pensioners or from the rank and file. Communications made by the Central Information Bureau in connexion with medical establishments and nursing homes will be carried on, under paragraph 23 of Appendix to Army Medical Regulations, by the Inspector General of Voluntary Aid, or by His Majesty's Commissioners in Austria and Hungary.

Duties of the Central Information Bureau.

(5.) It is the duty of the Central Information Bureau :—

(i.) To receive in time of war, for the purpose of carrying out the objects indicated and defined in paragraph 2, from

(a) Field Hospitals and Reserve Medical Units in the area of operations ;

(b) Military and Civil Hospitals, Red Cross Reserve Hospitals, Railway Sick rooms (Rest Stations) ; and Convalescent Homes in the Home Territory.

(c) Private nursing homes in the Home Territory, as reliable information as possible concerning sick and wounded soldiers treated in the respective establishments, the nature of their diseases or wounds, and their condition

(ii.) To keep itself constantly informed as to any alterations in the whereabouts of these persons.

(iii.) To carefully collect the items of information in such a manner that they may be communicated at once to the Information Bureaux, which will be established for Austria and for Hungary, and in this way make it possible by a regulated plan to give relations reliable news regarding the sick and wounded (paragraph 9); also in order that the information may be published as soon as possible (paragraph 8).

In time of war no communication shall be held with Red Cross Societies of the enemy or neutral States, with a view to imparting or soliciting information regarding sick and wounded soldiers, except with the sanction of the Emperor. In this respect, the War Office will obtain His Majesty's decision, as cases arise, and communicate to the Inspector General of Voluntary Aid the conditions under which such communication may be made.

Collection of the Original Material.

(6.) The preparation of lists noting the admission or discharge and condition of sick and wounded, as well as the forwarding of these lists to the Central Information Bureau, will be carried out as follows:—

- (a) by the military administration officials, ordered to perform these duties in the case of Field Hospitals and Reserve Medical Units in the area of operations;
- (b) by similar officials for the Military Medical Establishments in the Home Territory;
- (c) by officials of the Red Cross Society in the case of civil hospitals, Red Cross Reserve Hospitals, Railway Station sick-rooms (Rest Stations) in the Home Territory, Convalescent Homes and private nursing homes. In the case of the rest stations reports will only be sent in regarding sick or wounded who stay over 48 hours in the sick room on account of the risk of aggravating their condition by continuing the journey, or in the case of a death occurring in the station, or in the case of a dead body being taken over by it.

The lists will be forwarded direct to the Central Information Bureau by the officials appointed to prepare them under (a) and (b), and also by those noted under (c), throughout the Austrian and Hungarian monarchies and provinces.

The necessary printed forms for the collection of the original material will be supplied by the War Office and the Central Information Bureau for establishments under (a) and (b), and by the Austrian and Hungarian Red Cross Societies for establishments under (c).

Form of the Lists.

(7.) The form of the lists to be sent in to the Central Information Bureau, as well as all printed forms, will be of a uniform nature.

Publications.

(8.) Publication of information in newspapers may only be made under sanction of His Majesty the Emperor.

Publication must be confined to a strictly accurate statement of the names of the sick and wounded soldiers who have been admitted or discharged from the establishments noted under paragraph (5) (i) (a), (b) and (c), together with a short statement of their condition.

Publication will be made in the Austrian and Hungarian languages.

Special Provisions.

(9.) Communications with members of the public seeking information, the distribution of written information regarding sick and wounded of their own army, as well as the carrying on of correspondence between sick and wounded soldiers in hospitals and their relatives, will be effected, not by the Central Information Bureau, but by the Information Bureaux of Austria and Hungary, established for the purpose. The data supplied by the Central Information Bureau will be used for this purpose. (Paragraph 5, iii.)

In order to facilitate communication between sick and wounded soldiers and their relatives, the Austrian and Hungarian Red Cross Societies will endeavour to appoint officials to the Military, Civil, and Red Cross Hospitals in the Home Territory who will carry on correspondence in prescribed form with the relatives in cases where the sick and wounded are illiterate or incapable on account of illness of doing so themselves.

Forms containing the necessary data, in several languages, for the purpose of this correspondence, will be supplied to the directors of the Military and Civil Hospitals of the Home Territory, on the outbreak of war, by the Austrian and Hungarian Red Cross Societies. They will be kept in store in time of peace for use as required.

Inquiries regarding wounded, sick or prisoners of the enemy will be dealt with by the Central Information Bureau according to instructions from the Inspector General of Voluntary Aid.

Rules for the Conduct of Business.

(10.) The duties and powers of the personnel appointed to the Central Information Bureau will be regulated by Rules for the Conduct of Business.

The Rules will likewise determine all the printed forms, lists and books required for carrying on the work of the

Central Information Bureau, as well as the procedure for identifying hospitals and soldiers treated in them.

On the outbreak of war the Inspector General of Voluntary Aid will apply to the Presidents of both Ministries of the Interior, (paragraph 29 of the Rules for the Conduct of Business), to instruct all subordinate officials to place themselves in direct communication with the Central Information Bureau, as well as with the Austrian and Hungarian Red Cross Societies and the Chief Red Cross Delegates attached to Commanders-in-Chief of Armies in the area of operations, with a view to obtaining the earliest possible information.

Defrayment of Expenses.

(11.) The expenses of the preparation, installation and maintenance of the Central Information Bureau will be defrayed by the Austrian and Hungarian Red Cross Societies in proportion to the recruit contingents of the two countries.

These expenses refer specially to the outlay on office furniture, the necessary stamps, the pay of the personnel and the cost of light and fuel for the building.

The cost of providing the building and of publications will be borne by the State.

Opening and closing the Bureau.

(12.) The Inspector General of Voluntary Aid will give orders for opening the Central Information Bureau.

In like manner the Bureau will close on demobilization of the army.

II.—RULES FOR THE CONDUCT OF BUSINESS.

Introduction.

In order to keep relatives informed regarding the whereabouts and condition of sick and wounded, two distinct measures are necessary.

A.—Collecting, scheduling and arranging the information received.

B.—Communicating with the public who may demand information, and managing correspondence between the sick and wounded and their relatives.

A.—*General Provisions.*

(1.) The duties of the Central Information Bureau will be carried on under the direct command of the Inspector General of Voluntary Aid.

No outside element must be introduced into the service; the task allotted to the Central Information Bureau must always be carried out under the strictest regulations, and admission to it, scrutiny of the lists, schedules, or demand for these are not permitted to anyone except on business.

Duties of the President, Vice-Presidents, and Secretary.

(2.) The direction of the work of the Bureau is in the hands of a President, who is nominated in time of peace.

He is assisted by a Vice-President and Secretary. The latter is responsible for the details of the work in all its branches and, with the aid of the assistants provided, will answer in the spirit of the detailed regulations all the questions which reach the Bureau.

The Secretary refers to the President only in exceptional cases; and the President as a rule has dealings with the assistants only through the Secretary.

Forwarding of the original information to the Central Information Bureau.

(3.) Lists, as in Form I and II, showing the movement of patients in the military medical establishments in the area of operations, (field hospitals and reserve medical units), as well as in the military medical establishments of the home territory, will be forwarded to the Central Information Bureau in accordance with paragraph 6 (a) and (b) of the Organization Statute.

(4.) With regard to the movement of patients in the civil hospitals, Red Cross Society's reserve hospitals, railway station rest stations or sick rooms, and convalescent homes, the officials of the Austrian and Hungarian Red Cross Societies appointed for the purpose, (Organization Statute paragraph 6, c), will send in lists of the sick and wounded admitted or discharged on Forms I and II.

The dates of admission or discharge for the preparation of these lists will be obtained by the officials of the Red Cross from the admission book of the medical establishment concerned; (Form 36 of the Regulations for the Army Medical Services, Part IV).

As regards entries of the discharge of patients, control of individual work is to be constantly exercised and thorough accuracy is to be assured by examination of the figures in the daily morning reports, (Form 24 of the Regulations above referred to).

(5.) As regards the date on which the reports of the Red Cross officials and the sending in of the lists in accordance with Forms I and II will be commenced, special orders will be issued.

The submission of the above-mentioned reports will begin in the case of hospitals established after the commencement of hostilities on the date of the establishment of the hospital concerned and on the reception of sick and wounded soldiers into it.

(6.) The submission of lists according to Forms I and II shall be in as short periods as possible, at any rate not greater than 5-day periods. Frequently, however, one must endeavour to send in lists if possible daily. In most cases it is recommended that the lists according to Form I should be sent in daily and those according to Form II every 5 days.

Envelopes, according to Form III, are to be used in sending in the lists.

The printed Forms I and II and the printed cover Form III will be supplied, in the case of the military establishments mentioned in paragraph (3), by the War Office or by the Central Information Bureau; but for the officials mentioned in paragraph (4), by the Austrian or the Hungarian Red Cross Society. (Paragraph 6 of the Organization Statute and paragraph 30 of these Regulations.)

(7.) When, under exceptional circumstances, one of the hospitals mentioned in paragraph (4) has commenced work and the Red Cross Official arrangements are not ready in the establishment at the time, (paragraph 5), the original material will be kept posted up for the period pending the arrival of the official concerned.

(8.) As regards wounded and convalescents who are being looked after in private homes, the Austrian Red Cross Society or the Hungarian Red Cross Society and the provincial and

affiliated branches of these Societies, will ask the private individuals concerned to send in the lists to the Central Information Bureau; but, unless they are certain that this will be done in a reliable manner, they will appoint one of their members to act as the official for this purpose.

Collection and preparation of the original material.

(9.) The lists, Forms I and II, including the lists received of wounded and convalescents in private homes, on reaching the Central Information Bureau will be entered in the register (Form IV), and indexed with the consecutive number according to the time of receipt.

(10.) After they have been entered in the register the Secretary will pass lists I and II to his assistants and cause lists according to Form V to be prepared.

The preparation of Form V will be carried out in 16 groups as follows:—

Group 1.	Infantry Regiments	1 to 12.
„ 2.	Do.	13 to 24.
„ 3.	Do.	25 to 37.
„ 4.	Do.	38 to 50.
„ 5.	Do.	51 to 63.
„ 6.	Do.	64 to 76.
„ 7.	Do.	77 to 89.
„ 8.	Do.	90 to 102.
„ 9.	The Jäger battalions.	
„ 10.	Cavalry.	
„ 11.	Field and Garrison Artillery.	
„ 12.	The Landwehr for Austria.	
„ 13.	Do.	Hungary.
„ 14.	The Landsturm for Austria.	
„ 15.	do.	Hungary.
„ 16.	Headquarter Staff, engineers, pioneers, railway and telegraph troops, transport and army medical service and all other persons belonging to the army or attached to the army in the field.	

(11.) As a rule, the assistants appointed to each group will not be changed; under certain circumstances it may be possible to appoint an assistant to deal with every two groups, or on the other hand, should the necessity arise in connexion with general mobilization, the number of assistants may be increased in single groups according to requirements.

The distribution, however, of the work into 16 groups will remain under all circumstances the same, but when it is necessary to prepare cards for persons belonging to the enemy's forces (paragraph 33), a 17th group will be formed.

(12.) The lists I and II, circulated by the Secretary, will be dealt with by the assistants, in preparing the lists according to Form V, in such a manner that each assistant will enter in copying ink the information concerning each person belonging to his group in the spaces lined as shewn in Form V, distinguishing between admissions and discharges by using separate forms prepared exactly as in Form V, and entering the name of the medical establishment last.

Each list according to Form V is to be prepared on a sheet of good office paper 29 inches long by $18\frac{1}{2}$ inches broad. Each sheet is to be lined as in Form V into 32 spaces, each space being approximately $\frac{4}{5}$ ths of an inch wide and 9 inches long.

For convenience in preparing the lists, the sheets lined as in Form V may be used in half sheets of 16 spaces, in which case two copies will invariably be taken off under the same number in the copying press.

The entry must be made very clearly, and the name of the sick or wounded person especially should be written somewhat larger. Continuing the entry right up to the end of the space is to be strictly avoided. The entry is to be made in German, and only the rank of the wounded and disease is to be entered in Hungarian. The hospital, regiment and rank are to be shown in abbreviations, but in such a manner that there is no possible doubt as to what is indicated.

When there is any doubt on account of bad writing as to the individual name, regiment, company, etc., the assistant will go to the Secretary for a decision.

The assistant must verify the extraction of the information by signing his name against the item concerned in the lists I and II and immediately pass the lists on to the next group, the assistant of the last group returning them to the Secretary.

(13.) The lists prepared in accordance with Form V, with the admissions and discharges on separate forms, will be marked in small and clear writing in copying ink by consecutive numbers on the upper right hand corner of the first space by the Secretary and he will immediately cause three impressions of each to be taken off in the copying press

on cardboard; the admissions being on buff coloured cardboard and the discharges on light green cardboard; an impression will also be made on ordinary paper.

(14.) One copy of each of the impressions on cardboard will be sent direct and without delay to the Austrian Red Cross Society's Information Bureau and another copy to the Hungarian Red Cross Society's Information Bureau. The third copy on cardboard will be kept in the Central Information Bureau as well as the copy on ordinary paper; the last being intended for special use as noted in paragraph (23).

(15.) The Secretary will endeavour to have all the original material coming to the Central Information Bureau entered in the lists according to Form V on the date of receipt.

The Secretary is also responsible for the circulation of the original material amongst the groups and for satisfying himself by the signature of the assistants that they have abstracted the information and also for keeping himself informed by random checking as often as possible that the assistants are carrying out their duties correctly and thoroughly.

(16.) Information coming to the Central Information Bureau from other sources (paragraphs 31 to 34) will be entered in lists according to Form V in the same manner.

(17.) The copy of the lists, according to Form V, on the cardboard which is retained in the Central Information Bureau will be passed by the Secretary to the assistants, who will immediately cut them into coupons, each containing information regarding one soldier.

Immediately after these coupons are prepared they are to be arranged by the assistants concerned according to regiments, and alphabetically in the regimental series, and immediately afterwards placed in the corresponding compartments of the boxes supplied to each assistant for the purpose.

(18.) The preparation of the coupons will be continued day by day as the copies of Form V come from the copying press and the arranging and filing of the coupons will also be carried on daily.

The assistant will determine which coupons concern one and the same soldier at the time he sorts the coupons, and these coupons, as well as any that come afterwards, dealing with the same soldier, will, immediately after the identity of the soldier is verified, be securely fixed together.

(19.) The lists of casualties published by the War Office will be used for the purposes of the Central Information

Bureau in such a manner that the printed casualty lists, after any required completion of the items, such as regiment, rank, etc., will be cut into coupons and each individual coupon pasted on to cardboard. For facilitating this work, cardboard will be kept ready for the purpose cut into the size of the coupons made from Form V.

Similar coupons will be prepared from the casualty lists of those shewn as missing.

Two copies of the published casualty lists of the War Office will be supplied to each of the assistants for carrying out this duty.

(20.) The assistants will proceed according to the provisions of paragraphs (17) and (18) in dealing with the coupons prepared from the casualty lists.

(21.) Soldiers mentioned in the casualty lists would only be shewn in the list of Form V, when they have been received into medical establishments and entered in a list, according to Form I.

(22.) The printing for general information of the lists in Form V and the information contained in them will depend, as regards extent and time, on the approval of the military authorities and only when a communication to the effect that there is no objection by the War Office is made to the Inspector General of Voluntary Aid.

Such lists will always be printed in Roman character with the surname placed first.

(23.) A collection of the lists in Form V (paragraph 14) will be kept by the Secretary; they are intended for the purpose of being sent for printing when the time for doing so arrives.

The Secretary will send these lists daily to be printed in sequence when the War Office has communicated its sanction for so doing.

(24.) One copy of each of the printed lists will be sent to the official "Wiener Zeitung," the official "Budapesti Kozlony," to the Inspector-General of Voluntary Aid, to all Committees of the Imperial Army and of the Austrian and Hungarian Landwehr concerned with the maintenance of the principal register of persons liable to military service, and two copies to the officers commanding the reserve depots. The remainder will be sent to the State printing office for the special official of that institute concerned with distribution of material.

The distribution of the work within the Central Information Bureau.

(25.) Communications sent to the Central Information Bureau, so long as they are not addressed personally to the president, will be opened by the Secretary.

The Secretary is also charged with the duty of entering the receipt of Forms I and II (paragraph 9) in the register, for the rapid preparation of the lists according to Form V (paragraphs 10 to 13), for duplicating these lists as laid down in paragraph 14, for communicating with the State printing office (paragraph 23), for the supervision of the 17th Group in preparing cards (paragraphs 11 and 33), for the forwarding of printed matter (paragraph 30), and for the general conduct of the duties within the Bureau.

(26.) The Secretary supervises the keeping of the Schedule (Form VII). In this Schedule all papers reaching the Central Information Bureau will be entered and the action taken added as soon as possible.

The President of the Central Information Bureau decides the action to be taken regarding any papers.

(27.) The Secretary will give unremitting attention to the correct keeping of the register (Form IV), and, for this purpose, keep a watch on the lists I and II, which should be received from individual medical establishments.

(28.) For the general work of the office, three assistants will be provided, together with one man and an assistant to work the copying press.

Special work of the Central Information Bureau.

(29.) In order to make the work of the Central Information Bureau as complete as possible, it will keep in touch with the officials of the military administration branch concerned.

It will make special efforts to obtain accurate information, and to see that all the military medical institutions in the empire, as well as the civil hospitals, the Red Cross hospitals, convalescent homes, etc., are actually sending in their reports.

For this purpose, at the commencement of hostilities, the Inspector-General of Voluntary Aid will submit a request to the President of the Austrian Ministry, and also to the President of the Hungarian Ministry, that subordinate officials be instructed to communicate direct with the Central Information Bureau any information regarding sick and wounded soldiers which the Bureau may demand.

(30.) The necessary printed forms required in accordance with paragraphs (3), (5) and (7), for the field hospitals and the reserve medical units in the area of operations, and for the military medical establishments in general, will be prepared in time of peace by the War Office. For each section of a field hospital and for each branch of a reserve or special military hospital, a uniform packet will be kept ready containing one hundred printed Forms I, one hundred printed Forms II, and fifty printed Forms III.

These forms will be kept as follows:—

- (a) For field hospitals, in the garrison hospitals where they will be mobilized.
- (b) For reserve medical units in the area of operations, in the equipment stores where the equipment of these hospitals is held. (Regulations for the Army Medical Services, Part IV, paragraphs 273 and 275.)

For other military medical establishments, the required equipment will be deposited with the territorial command to which, in case of mobilization, these establishments are assigned.

Civil hospitals will receive the forms required in accordance with paragraphs (4) and (6) in uniform packets of one hundred copies each of Forms I, II, and III from the Austrian or Hungarian Red Cross Society, before the commencement of submission of reports (paragraph 5) and after receipt of information that the hospital has been opened, or sick and wounded soldiers admitted.

The forms will be replenished on application, in the case of field hospitals and reserve medical units in the area of operations and military medical establishments in general, by the Central Information Bureau at the expense of the War Office, and in the case of Red Cross officials attached to other hospitals, by the Red Cross Societies of Austria and Hungary.

Only uniform packages will be forwarded.

Further work of the Central Information Bureau:—

(a.) *With regard to Persons belonging to the Army who have been made Prisoners of War.*

(31.) Should information appear in the public press regarding persons belonging to the Army who have been taken prisoner, the Central Information Bureau will extract this information for the lists in Form V.

The Inspector-General of Voluntary Aid will, as occasion arises, determine the kind of information and the method of obtaining it regarding persons made prisoners of war and regarding the fate of the sick and wounded amongst them.

(b.) *With regard to persons belonging to allied armies.*

(32.) Any information regarding persons belonging to an allied army that appears in the lists I and II will not be entered in the lists on Form V, but extracts which shall contain all the data regarding such persons will be made in the Central Information Bureau.

These extracts will be sent to the Central Administration Office of the allied army under conditions of reciprocity, at short intervals.

(c.) *With regard to persons belonging to the enemy's army.*

(33.) Similarly, prisoners of the enemy, who are being treated in the medical establishments, will not be shewn on the lists of Form V.

Instead, a card according to Form VIII (paragraph 11) will be prepared in group 17 for each person belonging to the enemy, whose name appears in lists I and II, and the information which may be subsequently communicated will be taken from these cards.

Provisions for dealing with those who may die during transport.

(34.) Patients in hospital trains, hospital ships and sick and wounded who are being looked after in their own homes (paragraph 114 of Appendix to part IV of Army Medical Service Regulations) will not be included in the above arrangements for submission of reports.

In order to obtain information regarding the names of those who died during transport an understanding must be come to with the technical and administrative committee especially appointed at the War Office for the preparation of casualty lists for publication, and the information so obtained will be used for entry in lists, Form V, at the Central Information Bureau.

Termination of the work of the Central Information Bureau.

(35.) All the original material reaching the Central Information Bureau, the cards prepared by the Bureau as well as the schedules of correspondence, will be preserved, according to detailed instructions from the War Office, and all the office material will be handed over to the technical administrative military committees (paragraph 11 of the Organization Statute).

Personnel of the Central Information Bureau.

(36.) The following establishment will be provided in the event of general mobilization with a view to distributing the work of the Central Information Bureau in seventeen groups and carrying it on as a rule without changing the assistants.

1 Secretary.

17 Assistants for the groups; the assistants ought to have the necessary knowledge of languages.

3 Assistants for general work in the office.

1 Man for copying press.

1 Assistant for „

2 Servants.

In all, 25 persons.

Pay of the Personnel.

(37.) The Secretary will receive a monthly salary of £10.

The assistants and copying press men, daily pay of two to four shillings.

The servants will receive clothing and £2 10s. monthly, except when they have been detached for the duty from the Landsturm.

(38.) The duty in the registry of the Central Information Bureau will be carried out as far as possible by voluntary gratuitous labour which can be obtained from the Landsturm in consideration of release from Landsturm service; or, in case of war, by persons liable to Landsturm service being ordered to perform the duties.

Persons belonging to the Landsturm cannot claim pay from the military authorities.

One-third of the assistants and the two copying press men will receive as daily pay two shillings, one-third three shillings, and one-third four shillings, according to the merits of their work.

B. Communication with persons seeking information.

(39.) As regards the manner in which communications with persons asking for information shall be carried out and as regards the arrangements made for the correspondence of sick and wounded soldiers, these will be arranged for in Austria by the Central Red Cross Committee and in Hungary by the president and executive council of the Hungarian Red Cross Society. (Paragraph 5, iii, and paragraph 9 of the Organization Statute.)

C. Inventory.

(40.) A statement of the preparations to be made in time of peace by the Central Information Bureau, and also of those articles which must be provided and supplied to the Bureau on mobilization, is contained in Form IX.

List of sick and wounded discharged from (here note hospital, etc.)
between (date).

List of sick and wounded discharged from (here note hospital, etc.)
between (date).

In the admission book of the hospital.	Command, Regiment or Establishment	Company, Squadron, Battery, etc.	Rank	Surname and Christian name	Disease or wound.	Discharge took place
Consecutive number of the admission book of the hospital.					(All wounds, as well as the following seven diseases :—Cholera, enteric, typhus, intermittent fever, inflammation of lungs and pleurisy, dysentery, small-pox, will be entered according to the wording in the admission book. Other diseases need not be noted.)	on the date. in what way (by discharge to duty, by evacuation, by death, etc. In case of transfer to another hospital the name of the hospital is to be mentioned, and in case of death the direct cause of death).

Surgeon in Charge.

FORM III.

This form is simply the envelope in which the Lists (Forms I and II) are sent, with the address printed in Austrian and Hungarian.

TO THE

CENTRAL INFORMATION BUREAU

OF THE AUSTRIAN AND HUNGARIAN
RED CROSS SOCIETIES IN

VIENNA.

*Lists of sick and wounded
soldiers.*

Register of the lists of sick and wounded soldiers received in the Central Information Bureau.

[illegible]

Specimen page for

Abstract of the Lists in Forms I and II made in the several groups of the Bureau.
(The spaces are approximately $\frac{4}{5}$ -inch wide and 9-inches long.)

I.R. 70, Co. 16, Inf. *Bernajevic Adam*.

Wound in the left calf. Admitted on
10-5-83, by reporting himself. Sect. 1 of
Field Hospital IX, Doboj.

FORM VI.

Specimens of Coupons cut from Form V. (These coupons should be the same size as the spaces on Form V, viz., $\frac{1}{4}$ -inch wide by 9-inches long.)

I.R. 70, Co. 16, Inf. *Bernagevic Adam*.

Wound of left calf. Admitted on 10-5-83, by reporting himself,
Sect. 1 of Field Hospital IX, Doboj.

I.R. 70, Co. 16, Inf. *Bernagevic Adam*.

Wound of left calf. Discharged 15-5-83, by Hospital Train No. III,
from Sect. 1 of Field Hospital IX, Doboj.

FORM VII.
Schedule of Documents received, etc.

Schedule of Documents received, etc.

[illegible]

Specimen of Form of Card used for collecting information regarding sick and wounded of the enemy.

REGIMENT, ETC.....

COMPANY, SQUADRON, BATTERY, ETC.....

RANK.....

NAME AND CHRISTIAN NAME.....

[illegible]

FORM IX.

The Central Information Bureau must have:—

ready in time of peace.	assured by contract in the event of mobilization.
300 uniform packets of 100 copies each, of printed Forms I, II and III.	37,500 cardboard sheets of the same size, weight and price as that supplied by the Imperial private paper factory, Schloglmühl, contracted for in such a manner that the Contractor binds himself to supply one-half 4 weeks after mobilization, and to complete the requisition within 8 weeks of mobilization.
13,750 cardboard sheets, size 13½ inches by 29 inches approximately.	In addition to the Register Form IV and to Schedule Form VII, 18,750 sheets of good office paper, size 18½ inches by 29 inches approximately, must be arranged for, to be supplied in the event of mobilization. These sheets will be ruled according to Form V for the requirements of paragraph 12 of the Rules for the conduct of business. Further, for the purpose of forwarding the lists drawn up in accordance with Form V to the Information Bureaux (<i>i.e.</i> , in Vienna and Budapest), the required packing paper must be provided, as well as the necessary writing materials. Tables and chairs for the Bureau will be borrowed.
1 cardboard cutter with 19-inch blade fixed on table.	

APPENDIX IV.

VOCABULARY OF TERMS USED IN CONNEXION WITH THE
AUSTRO-HUNGARIAN ARMY MEDICAL SERVICE IN THE FIELD.

(The vocabulary is arranged as far as possible according to echelon of units in the field instead of alphabetically, in order to bring together as much as possible for facility of reference the terms connected with each unit. In all the official publications German terms are used for the imperial army of the dual monarchy, but for the Hungarian Landwehr and the Hungarian Voluntary Aid organizations Hungarian terms are employed. Only the German terms are given here.)

PERSONNEL.

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Militärarzt</i>	... Army medical officer.
<i>Militärärztliches Offiziers-</i> <i>korps</i>	Army Medical Officers' Corps.
<i>Generaloberstabsarzt</i> *	... Chief of the Army Medical Officers' Corps.
<i>Leitender Militärarzt</i>	... General term for a directing or administrative medical officer.
<i>Armeechefarzt</i> ...	... Principal medical officer of an army.
<i>Korpschefarzt</i> ...	... Principal medical officer of an army corps.
<i>Divisionschefarzt</i> ...	... Principal medical officer of a division.
<i>Brigadefarzt</i> ...	... Senior medical officer of a brigade.
<i>Kolonnenchefarzt</i> ...	... Senior medical officer of a column.
<i>Detachementchefarzt</i>	... Senior medical officer of a detachment.
<i>Sanitätschef bei einem</i> <i>Armeegeneralkommando</i> <i>(Leiter der rückwärtigen</i> <i>Sanitäts-anstalten)</i>	} Principal medical officer of an army lines of communi- cation. (Director of clearing hospital units.)

* See page 38 for the other grades of medical officer.

GERMAN TERMS.

ENGLISH EQUIVALENTS.

<i>Sanitätschef beim General etappenkommando</i>		Principal medical officer of lines of communication, com- mon to two or more armies.
<i>Salubritätskommission</i>	...	Sanitary committee.
<i>Festungschefarzt</i>	...	Senior medical officer of a fortress.
<i>Belagerungschefarzt</i>	...	Principal medical officer of a besieging force.
<i>Bezirksschefarzt</i>	...	Senior medical officer of a fortified area.
<i>Sanitätshilfspersonal</i>	)	Subordinate medical personnel of regimental units.
<i>Truppendienstpersonal</i>		
<i>Sanitätsapparat</i>	...	Personnel and equipment for medical services of a unit or command.
<i>Sanitätsgehilfe</i>	...	Regimental N.C.O.s trained for medical services with their units (medical assist- ants).
<i>Bandagenträger</i>	...	Carriers of medical and surgi- cal equipment with regimen- tal units.
<i>Blessiertenträger</i>	...	Stretcher-bearers of regimental units (employed in peace as hospital orderlies in certain military hospitals).
<i>Blessiertenträgerpatrouille</i>		Stretcher squad.
<i>Blessiertenträgerabteilung</i>	...	Bearer company formed of regimental stretcher-bearers.
<i>Sanitätspersonal</i>	...	General term for officers and men of the Army Medical Corps.
<i>Sanitätstruppe</i>	...	The Army Medical Corps.
<i>Sanitätsoffizier or Offizier der Sanitätstruppe</i>	)	Officer (non-medical) of the Army Medical Corps.
<i>Sanitätsmannschaft*</i>		Warrant officers, N.C.O.s and men of the Army Medical Corps.

* See page 43 for the different grades of warrant officers, non-commissioned officers and men.

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Sanitätsabteilung</i> ...	... Detachment (or company) of the Army Medical Corps.
<i>Feldsanitätsabteilung</i> ...	... Detachment of Army Medical Corps with a field medical unit.
<i>Sanitätsmannschaftspatrouille</i>	Squads of Army Medical Corps personnel for searching the battlefield.
<i>Reservepersonal</i> ...	... Personnel of the clearing hospital units.
<i>Reservesanitätsabteilung</i> ...	... Detachment of Army Medical Corps with clearing hospital units.
<i>Begleitpersonal</i> ...	... Personnel for medical charge of convoys.
<i>Landsturmsanitätsabteilung</i>	Army Medical Corps detachment, formed of Landsturm, for duty in military hospitals of home territory on mobilization.
<i>Pflegepersonal</i> ...	... Personnel for nursing duties.
<i>Krankenwärter</i> ...	} Sick nurses or ward orderlies (civilians).
<i>Krankenpfleger</i> ...	
<i>Krankenwärterin</i> ...	} Females nurses.
<i>Krankenpflegerin</i> ...	
<i>Konsiliararzt</i> ...	... Consulting physician or surgeon.
<i>Militärmedikamentendirektion</i>	Administrative staff for supply of medical and surgical equipment.
<i>Medikamentenbeamter</i> ...	... Pharmacist official.
<i>Pharmazent</i> ...	... Subordinate pharmacist official.
<i>Apothekenhilfsarbeiter</i> ...	... Dispensary assistant.
<i>Freiwillige Sanitätspflege</i> ...	Voluntary aid.
<i>General-Inspektor der freiwilligen-Sanitätspflege</i>	Inspector-General of voluntary aid.
<i>Kommissär für das Hilfsvereinswesen</i>	Commissioner (in Austria or Hungary) of voluntary aid societies in the home territory.

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Korpsdelegirter</i>	Delegate of a voluntary aid society with an army corps.
<i>Hauptdelegirter des Roten Kreuzes</i>	Chief delegate of the Red Cross in the field.
<i>Delegirter des Roten Kreuzes</i>	Ordinary delegate of the Red Cross.
<i>Marianer</i>	Member of the Teutonic Order of Knighthood.
<i>Kranke</i>	Sick.
<i>Verwundete</i>	Wounded.
<i>Marode</i>	Patients with trivial sickness or injury.
<i>Marodenkompagnie</i>	Company formed of <i>Maroden</i> for duty in improvised field medical posts.
<i>Leicht-krank (verwundete)</i>	Slightly sick (or wounded).
<i>Schwer-krank (verwundete)</i>	Seriously sick (or wounded).
<i>Marsch-(geh) fähig</i>	Fit to walk.
<i>Marsch-(geh) -unfähig</i>	Unfit to walk.
<i>Transportabel</i>	Fit for transport.
<i>Untransportabel</i>	Unfit for transport.
<i>Kriegsdiensttauglich</i>	Fit for service in the field.
<i>Kriegsdienstuntauglich</i>	Unfit for service in the field.
<i>Rekonvaleszenten</i>	Convalescents.
<i>Genesene</i>	Recovered.

MEDICAL UNITS.

<i>Sanitätsdienst bei der Truppen</i>	Medical service with regimental units.
<i>Marodenzimmer</i>	Regimental sick room (at billeting places on line of march).
<i>Krankensammelplatz</i>	Place, where regiments collect sick on line of march.
<i>Verbinderaum</i>	Area where first aid is given.
<i>Hilfsplatz</i>	Regimental aid-post.
<i>Uebernahmsgruppe</i>	Receiving section of a regimental aid-post.

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Leichtverwundetengruppe</i> ...	Lightly wounded section of a regimental aid-post.
<i>Schwerverwundetengruppe</i> ...	Severely wounded section of a regimental aid-post.
<i>Feldsanitätsanstalt</i> ...	... Field medical unit.
<i>Zivilheilstation</i> ...	... Civil hospital, (in area of operations or elsewhere).
<i>Krankensammelpunkt</i>	} Place, where a field medical unit collects sick, (on line of march or in billeting areas).
<i>Krankensammelstelle</i>	
<i>Infanterie - Brigadesanitätsanstalt</i>	Infantry-Brigade medical unit, (field ambulance).
<i>Infanterie - Divisionssanitätsanstalt</i>	Infantry - Divisional medical unit, (field ambulance).
<i>Kavallerie - Divisionssanitätsanstalt</i>	Cavalry-Divisional medical unit (cavalry field ambulance).
<i>Divisionssanitätsanstalt mit Felddausrüstung</i>	Field ambulance with field equipment.
<i>Divisionssanitätsanstalt mit Gebirgsausrüstung</i>	Field ambulance with mountain equipment.
<i>Marodenhaus</i> ...	... Local hospital (prepared by a field ambulance in a billeting area).
<i>Hilfsplatzwagenstaffel</i> ...	... Echelon of aid-post wagons, (section of a divisional medical unit).
<i>Wagen-Aufstellungs - (Halt-) platz</i>	Wagon halting places, (the most advanced point to which ambulance wagons go during an action for touch with regimental bearers).
<i>Wechselstation</i> ...	... Relay post for bearers in mountain warfare.
<i>Leichtverwundenstation</i> ...	Lightly wounded section of a divisional medical unit.
<i>Blessiertenwagenstaffel</i> ...	... Ambulance wagon echelon, (section of a divisional medical unit).
<i>Verbandplatz</i> ...	... Dressing station (section of a divisional medical unit).

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Halbverbandplatz</i> ...	... Sub-section of a dressing station.
<i>Verbandplatzviertel</i>	... Quarter section of a dressing station, (in mountain divisional medical unit only).
<i>Ambulanz</i> ...	... Ambulance; (section of a divisional medical unit equivalent to a tent division of a field ambulance).
<i>Halbambulanz</i> ...	... Sub-section of an ambulance.
<i>Sanitätsmaterialreserve</i>	... Reserve of medical and surgical stores, (section of a divisional medical unit).
<i>Deutsch-Ordens-Feldsanitätskolonne</i>	Field medical column of the Teutonic Order, (section of a divisional medical unit).
<i>Feldspital</i> ...	... Field hospital (600 beds).
, „ <i>mit Feldrüstung</i> ...	Field hospital (600 beds) with field equipment.
, „ <i>mit Gebirgs-ausrüstung</i>	Field hospital (600 beds) with mountain equipment.
<i>Feldspitalsektion</i> ...	... Section of a field hospital (200 beds).
<i>Feldspitalhalbsektion</i>	... Sub-section of a field hospital for mountain field hospital only.
<i>Feldapotheke</i> ...	... Dispensary of a field medical unit.
<i>Blessiertentransportkolonne des Roten Kreuzes</i>	Wounded transport column of the Red Cross.
<i>Gebirgs-Blessiertentransportkolonne (des Roten Kreuzes)</i>	Wounded transport column, attached to mountain field hospitals.
<i>Feldspital des Roten Kreuzes</i>	Field hospital of the Red Cross Society.
<i>Deutsch-Ordens-Verwundetenspital</i>	Field hospital of the Teutonic Order.
<i>Sanitätsreserveanstalt</i> ... <i>Rückwärtige Sanitätsanstalten</i> ...	} Clearing hospital units.

GERMAN TERMS.

ENGLISH EQUIVALENTS.

<i>Improvisierte-(mobile-stabile-)Krankenhaltstation</i>		Rest station for sick or wounded, (improvised, imobile or stationary).
<i>Krankenhaltstation mit (ohne) Nachtruhe</i>		Rest station with (without) accommodation for the night.
<i>Kranken - (Verwundeten-) sammelstation</i>		Place where sick or wounded are collected on line of road, between divisional medical units and rail-head.
<i>Kranken - (Verwundeten-) abschubstation</i>		Evacuating station, (place on the railway to which the sick and wounded are sent from field medical units for evacuation by line of rail).
<i>Einwaggonierungsort ...)</i>	}	Entraining station.
<i>Einwaggonierungsstation ...</i>		
<i>Schifffahrtsstation ...</i>	...	Embarking station.
<i>Mobiles-Reservespital</i>	...	Mobile reserve hospital (clearing hospital).
<i>Epidemiespital ...</i>	...	Infectious diseases hospital, (usually a section of a mobile reserve hospital).
<i>Feldmarodenhaus ...</i>	...	Field convalescent depot, (in area of field operations).
<i>Sanitätsfelddepot ...</i>	...	Advanced depot of medical stores.
<i>Korpseinheit ...</i>	...	Army corps unit of an advanced depot of medical stores.
<i>Verbrauchersatz ...</i>	...	Reserve of material section of an advanced depot of medical stores.
<i>Mobiles-Vereinsdepot des Roten Kreuzes</i>	des	Mobile depot of the Red Cross Society, (a section of an advanced depot of medical stores).
<i>Ambulante Feldsanitätsanstalt</i>		Medical units on railways or waterways.
<i>Eisenbahn-Sanitätszug ...</i>	...	Medical unit on the line of rail, (general term).
<i>Spitalszug ...</i>	...	Hospital train.
<i>Krankenzug ...</i>	...	Improvised ambulance train.

GERMAN TERMS.

ENGLISH EQUIVALENTS.

<i>Abschubskrankenzug</i>	...	Ambulance train in evacuation zone only.
<i>Zerstreuungskrankenzug</i>	...	Ambulance train equipped for longer journeys into the home territory, (distributing zone).
<i>Normal- (Fünfigachsiger-) krankenzug</i>		Normal improvised ambulance train of 25 cars.
<i>Sechszwanzigachsiger- krankenzug</i>		Improvised ambulance train of 13 cars.
<i>Siebzigachsigerkrankenzug</i>		Improvised ambulance train of normal type with 13 car train added.
<i>Hundertachsigerkrankenzug</i>		Improvised ambulance train composed of two of the normal type of ambulance trains.
<i>Sanitätsschiff</i>	...	Medical unit on waterways, (general term).
<i>Spitalschiff</i>	...	} Hospital ship on rivers or lakes.
<i>Schiffsambulanz</i>	...	
<i>Krankenschiff</i>	...	Improvised hospital ship on rivers or lakes.
<i>Seeambulanz</i>	...	Hospital ship on seas.
<i>Ambulanzschiff</i>	...	Naval hospital ship.
<i>Krankenzerstreuungstation</i>	...	Distributing station for sick and wounded, (at base of evacuating zone).
<i>Krankenübergangstation</i>	...	Distributing sub-station for districts in the home territory.
<i>Militärsanitätsdienst im Hinterlande</i>		Medical service in the home territory.
<i>Militärsanitätsanstalt im Hinterlande</i>		Medical unit in the home territory.
<i>Verbandlokal</i>	...	Dressing station for a small fortified post.
<i>Bezirksmarodenhaus</i>	...	Local hospital for a group of small fortified posts.
<i>Festungsspital</i>	...	Fortress hospital.

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Reservespital</i> ...	... Reserve hospital, (<i>i.e.</i> military or general hospital in the home territory).
<i>Vereinsreservespital</i> ...	... Reserve hospital organized by the Red Cross Society.
<i>Vereinsauskunftsspital</i> ...	... Auxiliary hospital organized by the Red Cross Society.
<i>Vereinsreservedepot</i> ...	... Base depot of the Red Cross Society.
<i>Rekonvaleszenzhaus</i> ...	... Convalescent home.
<i>Privatpflege</i> ...	... Private nursing home.
<i>Lokal-Krankentransportkolonne</i>	Local transport column in the home territory.
<i>Zentralnachweisebureau</i> ...	... Central information bureau for receiving information about sick and wounded from the medical units.
<i>Auskunftsbureau</i> ...	... Information bureau (for Austria or Hungary) for distributing information, received by the central bureau, to relatives.

MEDICAL AND SURGICAL MATERIAL.

<i>Sanitätsmaterial</i> ...	... Material for army medical services, (general term).
<i>Verband-mittel (-stoff)</i> ...	... Material for dressings.
<i>Arznei-mittel (-körper)</i> ...	... Medicines.
<i>Sanitäts-ausrüstung</i> ...	... Medical and surgical equipment.
<i>Sanitätsmaterialersatz</i> ...	... Reserve supply of medical and surgical equipment.
<i>Ärztliche Requisiten</i> ...	... Clinical requisites.
<i>Naturalienreservenvorrat</i> ...	... Medical comforts.
<i>Diagnosentäfelchen</i> ...	... Specification tallies.
<i>Legitimationsblatt</i> ...	... Identity disc.
<i>Vormerkblatt</i> ...	... Medical history sheet (transfer certificate).

GERMAN TERMS.

ENGLISH EQUIVALENTS.

<i>Legitimationskarte</i> ...	...	Identification certificate for wearers of Red Cross brassard.
<i>Armbinde</i> ...	...	} Red Cross brassard.
<i>Neutralitäts-Abzeichen</i>		
<i>Verbandpäckchen</i> ...	...	First field dressing.
<i>Verbandtype</i> ...	...	Prepared dressing.
<i>Organtin</i> ...	...	Surgical gauze.
<i>Hohlschiene</i> ...	...	Leg splint.
<i>Militärärztliche Tasche</i>	...	Medical officers' pouch.
<i>Sanitäts-gehilfentasche</i>	...	Medical Assistants' pouch.
<i>Verbandtasche für Blessier- tenträger</i>		Surgical havresac (pouch).
<i>Verbandtornister</i> ...	...	} Surgical knapsack Clinical requisites knapsack Supplementary knapsack Medicine pouch of <i>Bandagen- träger</i> . Surgical saddlebag. Clinical requisites saddlebag.
<i>Ärztliche Requisitionstornister</i>		
<i>Stütztornister</i> ...	...	
<i>Arzneitasche</i> ...	...	Medicine pouch of <i>Bandagen- träger</i> .
<i>Verbandpacktasche</i> ...	...	Surgical saddlebag.
<i>Ärztliche Requisitionspack- tasche</i>		Clinical requisites saddlebag.
<i>Typenblechkiste</i> ...	...	Tin case for prepared dressings.
<i>Requisitionenblechkiste</i>	...	Tin case for clinical requisites.
<i>Medikamentenkistchen</i>	...	Small case of medical material for pack transport.
<i>Packkorbe</i> ...	...	Pannier for pack transport.
<i>Sanitätskorbe</i> ...	...	Medical and surgical pannier.
<i>Operationskorbe</i> ...	...	Operating room pannier.
<i>Typenkorbe</i> ...	...	Prepared dressings pannier.
<i>Bindenkorbe</i> ...	...	Bandages pannier.
<i>Holzwoollkorbe</i> ...	...	Wood wool pannier.
<i>Lebmittelkorbe</i> ...	...	Medical comforts pannier.
<i>Küchenkorbe</i> ...	...	Cooking utensils pannier.
<i>Medikamenten-und Apothe- kengerätekiste</i>		Dispensary chest.
<i>Grosser Medikamentenkasten</i>		Large medicine chest for a <i>Feldmarodenhaus</i> .
<i>Kleiner Medikamentenkasten</i>		Small medicine chest for a <i>Krankenhaltstation</i> .

GERMAN TERMS.		ENGLISH EQUIVALENTS.
<i>Verbindezelt</i> ...	...	... Operation tent.
<i>Bettensorten</i> ...	...	... Articles of bedding.
<i>Spitalkost</i> ...	...	} Hospital diet.
<i>Krankenkost</i> ...	...	
<i>Traiteurmässige</i>	<i>Verköstigt-</i>	Hospital dieting by caterer.
<i>ung</i>		
<i>Patriotische Spenden</i>	...	Voluntary gifts from the public.

TRANSPORT MATERIAL AND GENERAL TERMS CONNECTED
WITH REMOVAL OF SICK AND WOUNDED.

<i>Feldtrage</i> ...	...	... Field stretcher.
<i>Traggurten</i> ...	...	... Stretcher slings.
<i>Gebirgskraze</i> ...	...	... Back chair for carrying wounded in mountainous country.
<i>Räderbahre</i> ...	...	... Wheeled litter.
<i>Transport-Improvisation</i>	...	... Improvised methods of trans- port.
<i>Nothtrage</i> ...	...	... Emergency stretcher.
<i>Strohroste</i> ...	...	... Straw stretcher.
<i>Strohtragkranz</i> ...	...	... Straw stretcher-seat.
<i>Tragsitz</i> ...	...	... Stretcher-seat.
<i>Gebirgstragsitz</i> ...	...	... Stretcher-seat for use in hilly country.
<i>Schultertrage</i> ...	...	... Sling stretcher and seat for carrying wounded on a bearer's back.
<i>Gewehr-und Manteltrage</i>	...	... Rifle and greatcoat stretcher.
<i>Zeltblättertrage</i> ...	...	... Stretcher of <i>tentesabri</i> .
<i>Sacktrage</i> ...	...	... Stretcher improvised out of sacks.
<i>Deckentrage</i> ...	...	... Blanket stretcher.
<i>Gurten-und Seiltrage</i>	...	... Stretcher of slings and ropes.
<i>Waldtrage</i> ...	...	... Stretcher of branches of trees.
<i>Latten-und Stangentrage</i>	...	... Stretcher of battens and poles.
<i>Stroh-Lattentrage</i> ...	...	... Stretcher of straw and battens.
<i>Schleifenbahre</i> ...	...	... Trailer litter.

GERMAN TERMS.	ENGLISH EQUIVALENTS.
<i>Eisenbahntragbett</i> ...	... Stretcher cot for ambulance trains.
<i>Blessiertenwagen</i> ...	... Ambulance wagon.
<i>Krankenwagen</i> ...	... Ambulance car of trains.
<i>Tragtier</i> ...	... Pack animal.
<i>Hilfsplatzwagen</i> ...	... Aid-post wagon, (of divisional medical unit).
<i>Sanitäts fourgon</i> ...	... Covered wagon for medical and surgical equipment, (of Teutonic Order's Medical Column).
<i>Feldspitals-Packwagen</i> ...	... Field hospital stores wagon, (used as ambulance wagon when unloaded).
<i>Sanitätsrequisitenwagen</i> ...	... Medical requisites wagon, of dressing station section
<i>Sanitätsambulanzwagen</i> ...	... Equipment wagon, of ambulance section
<i>Sanitätsmaterialreserve- wagen</i> ...	... Equipment wagon, of reserve material section
<i>Deckelwagen</i> ...	... Covered wagon, chiefly used for medical comforts.
<i>Verpflegswagen</i> ...	... Supply wagon.
<i>Personenwagen</i> ...	... Carriage for field hospital non-mounted officers and officials.
<i>Tarantas</i> ...	... Carriage for non-mounted officers and officials in hilly country.
<i>Ärarische wagen</i> ...	... Government wagons.
<i>Fuhrwerke geleerter Verpflegstaffel</i>	Empty supply column or supply park wagons.
<i>Landesübliche wagen</i> ...)	Country carts.
<i>Landesfuhrwerk</i> ...)	
<i>Korps-wagen reserve</i> ...	... Army corps reserve of wagons for transport of wounded after an action.
<i>Evakuaton</i> ...	... General term for evacuation of sick and wounded.

GERMAN TERMS.

ENGLISH EQUIVALENTS.

<i>Kranken- (verwundeten-) abgabe</i>		Transfer of sick and wounded to medical units within the collecting zone.
<i>Kranken- (verwundeten-) abschub</i>		Evacuation of sick and wounded down lines of communication.
<i>Kranken- (verwundeten-) zerstreung</i>		Distribution of sick and wounded to establishments in the home territory.
<i>Kranken- (verwundeten-) unterbringung</i>		Provision of shelter for sick and wounded.
<i>Kranken- (verwundeten-) sortierung</i>		Classification of sick and wounded for transport.
<i>Kranken- (verwundeten-) transporte</i>		Convoy of sick and wounded.
<i>Kranken- (verwundeten-) beförderung</i>		Despatch of sick and wounded in convoys.
<i>Abschubsklinie</i> ...	...	Line of evacuation.
<i>Abschubsintensität</i> ...	...	Number of sick and wounded, who have to be evacuated in a given time.
<i>Abschubsplan</i> ...	...	Scheme of the evacuation of sick and wounded in a given military situation.
<i>Sanitätsplan</i> ...	...	Scheme of the medical arrangements for a given military situation.
<i>Perlustrierung</i> ...	...	Searching the battlefield for wounded.
<i>Instradierung</i> ...	...	Directing movements along a definite route.
<i>Abholungsturnus</i> ...	...	Time taken for a unit of transport material to go to a given point and return.
<i>Fassungsraum</i> ...	...	Accommodation in a unit of transport material.
<i>Lagerstätte</i> ...	...	Lying down accommodation.
<i>Belagraum</i> ...	...	Number of sick and wounded capable of being accommodated in a medical unit.



